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Practical Internet

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ISSUE 20
£2.95

Getting online cheaper, faster & easier

Building SITES

P16

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- **FREE** step-by-step book
- **FREE** Internet trial accounts

P24 Candid cameras

How to set up your own Webcam. Plus a selection of the sexiest, wackiest and weirdest cameras on the Net!

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Access all areas

P32

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Compuserve[§]	x	✓	x	£101.40	£215.40	£215.40
Demon	x	x	✓	£132.50	£132.50	£132.50
Pipex Dial	✓	x	x	£151.75	£151.75	£151.75
Virgin Net	✓	✓	x	£122.45	£122.45	£122.45
Global Internet	✓	✓	✓	£89.99	£89.99	£89.99

[†] Includes any applicable set-up charge but not introductory offers.

[§] Compuserve prices are set in US Dollars and converted at prevailing exchange rate.

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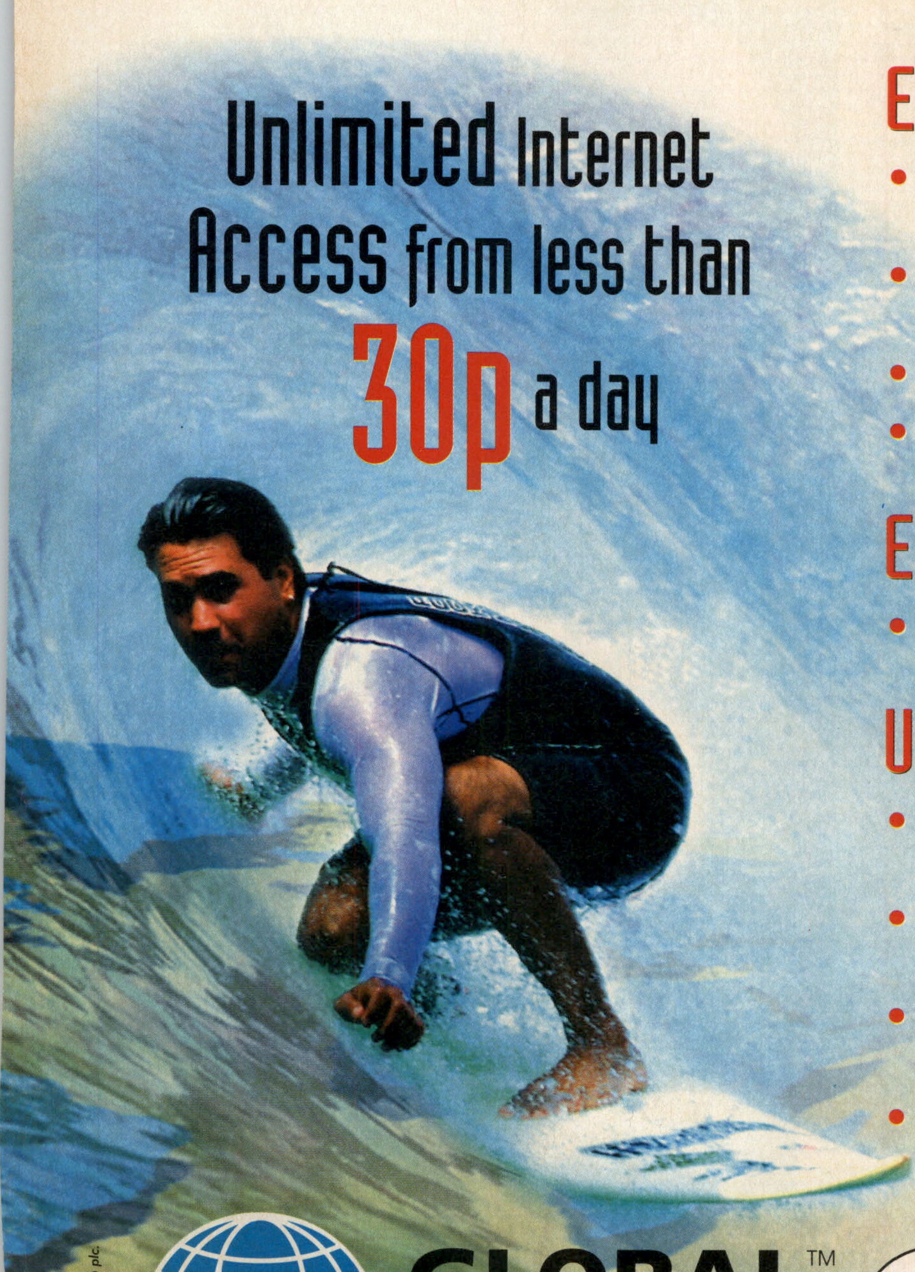

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WELCOME -who we are

Welcome to Practical Internet, a magazine for both new and more experienced Net users. As it says on the front, the magazine's all about getting on the Internet cheaper, faster and easier. Each issue of Practical Internet contains:

- Essential advice for improving your Net connection
- Down-to-earth features on using the latest technology
- Buyer's guides to hardware, software and service providers
- Troubleshooting guides that solve common woes
- Tons of suggestions for the best places to go online

Well, that's it. The summer, if we ever had one, is over. But while you're sitting indoors moaning about the lack of sunshine, you don't have to subject yourself to hours of TV repeats and trashy imports.

No, because we've got the Net (not we, as in *Practical Internet*, you understand. We don't own all of it yet). So now's the time to invest some effort in those home pages that – if you're like me – have probably been gathering dust and dead links over the last few months. We've got a free CD on the cover with the pick of the best Web-authoring software around. The programs included are for Macs and PCs (so no complaining emails this time, Mac users), and there's stuff for beginners and more advanced coders.

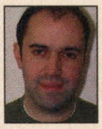
As well as this, you'll see that we've got a book on the front – *The Site Builder's Manual*, which details, in easy steps, how to put a page together using Allaire's HomeSite 3.0, which is also on the cover CD.

So get hammering out that HTML and then email us with the URL of your Web site. We'll get our home page expert James Seabright to check it out, and perhaps even feature it in our our regular 'Home Improvement' section.

Oh, and before I forget, a big shout of thanks to Jo for helping with the interFACE feature on page 47. Cheers.

Paul Douglas, Editor (pauld@paragon.co.uk)

ALSO ON BOARD...



Shaun Marin

shaunm@paragon.co.uk

This month, we sent Shaun to check out the interFACE pirate radio studios – and we haven't seen him since. Any knowledge of his whereabouts, email the Editor...

Geoff Spick

geoffs@paragon.co.uk

Fans of *NetGamer* magazine will recognise Geoff's name as he used to be the Editor. Now he's *Practical Internet's* Internet gaming guru – his section starts on page 81

Chris Ellison

chris@netfreedom.org

Founder member of the Campaign for Internet Freedom, motormouth Chris is dedicated to keeping the Net a place of free expression for all

Clive Parker

helpdesk@paragon.co.uk

Technical wizard Clive staffs our Net Surgery. If you've got any problems with connecting to the Net, he's the man to diagnose your DUNs or poke around with your proxies...

James Seabright

james@paragon.co.uk

HTML and Web design pro, James runs our regular 'Home Improvement' section, dedicated to helping you get the most out of your home page

Spammer

spammer@paragon.co.uk

Even Bill Gates isn't safe from our acid-tongued columnist. Who threw a spammer in the works?

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Practical
Inte
EVERY ISSU

Candid cameras

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HaCkInG ALL OvEr ThE WoRlD

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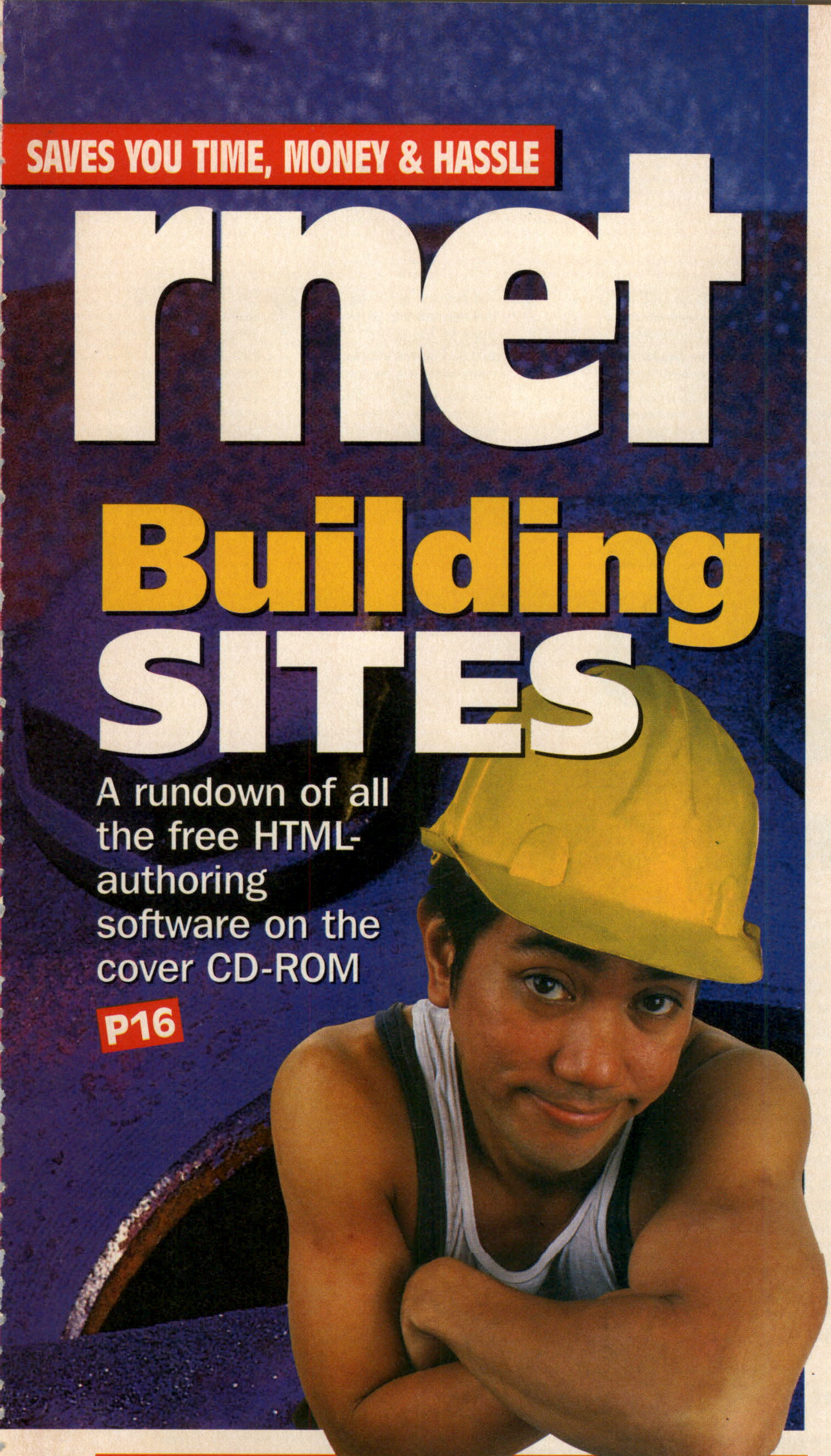
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rnet
Building
SITES

A rundown of all the free HTML-authoring software on the cover CD-ROM

P16

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Getting online cheaper faster & easier
Building SITES
Candid cameras
Access all areas
Plus! PIRATE RADIO ON THE NET • CASHING IN ON E-COMMERCE

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8 A group of computer hackers called the Cult of the Dead Cows has unleashed a powerful new Trojan Horse program that gives people complete access to your computer

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The complete insight into all things Internet...

News from the NET

56k
QuickCam

CONNECTION PRICES GO INTO FREE FALL

FREE NET ACCESS HAS BECOME A REALITY

THE PRICE OF Internet access is falling as new arrivals in the ISP market launch discount services. Two companies have even done away with the cost of subscription completely. Connect Free and The X-Stream Network are both offering free 'no frills,' unlimited access to the Internet. All the user has to pay is the cost of a normal local call.

So how can they do it? New ISP, Connect Free (**http://www.connectfree.net**) is working in conjunction with Telinco, a budget telephone provider, and claims it will be able to make a profit by siphoning off a percentage of the call traffic generated.

"We have to attract users who spend a lot of time online," said a spokesman. "But this is a genuine 'something for nothing' offer and we believe that it will change the way that Internet services are provided in this country." The company expects to have 15,000 customers signing up over the next three months and will stay in business by keeping overheads low: for example, it won't provide any technical support for users.

Something for nothing

The X-Stream Network (**http://www.x-stream.com**) has been offering free access for a cost of a local call to a limited area of the UK since March. It has over 60,000 registered users. The service is now being offered nationally and is funded by banner adverts that appear at the top of a user's screen.

"No one wants to be tied into monthly payments for a service that they can get for free," said a spokesman for X-Stream. "Now that the service is available nationally at local call rates, the financial benefits to users are even greater."

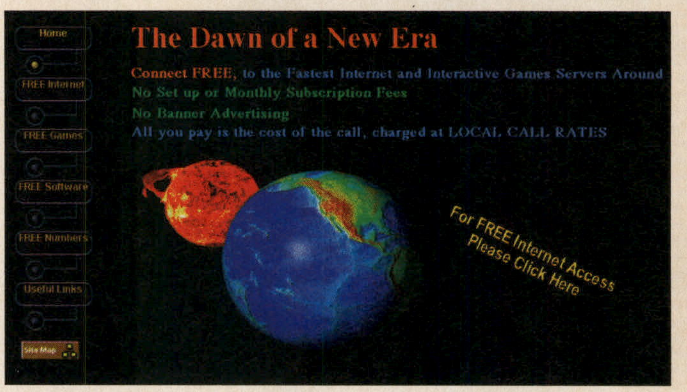
Both services are offered on a 'no frills' basis. Registration is online, so you will need to have access to the Internet either through a friend or by using a trial offer CD. Neither offers email or free Web space, although both companies do provide links to free Web-based email services such as Hotmail.

the x-stream network
100% FREE internet access

Connection at a discount

Two companies have also launched new discount services. Internet Alliance Exchange (**http://www.iax.net**) is offering its first 2,000 subscribers five years' Internet access for only £39.95 (excl. VAT). Anyone subscribing after this initial offer will still only have to pay £39.95 (excl. VAT) a year. Unlimited email addresses are included, but you have to pay £10 a year extra for Web space.

IAX
Business Account
Home Account



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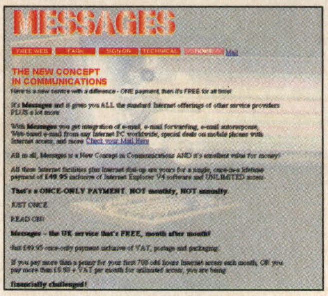

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Here is a new service with a difference - ONE payment, then it's FREE for all time!

It's **Messages** and it gives you ALL the standard Internet offerings of other service providers PLUS a lot more

With **Messages** you get integration of e-mail, e-mail forwarding, e-mail autoresponse, Web-based e-mail from any Internet PC worldwide, special deals on mobile phones with Internet access, and more Check your Mail Here

All in all, Messages is a New Concept in Communications AND it's excellent value for money!

All these Internet facilities plus Internet dial-up are yours for a single, once-in-a lifetime payment of **£49.95** inclusive of Internet Explorer V4 software and UNLIMITED access

That's a ONCE-ONLY PAYMENT. NOT monthly, NOT annually.

JUST ONCE

READ ON!

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Just £49.95 once-only payment inclusive of VAT, postage and packaging

If you pay more than a penny for your first 700 odd hours Internet access each month, OR you pay more than £8.80 + VAT per month for unlimited access, you are being

financially challenged!

Messages (**http://www.messages.co.uk**) is a new service from Athene Internet. For a one-off lifetime fee of £49.95 (incl. VAT). The service includes the normal add-ons such as email and free Web space, as well as technical support. Julian Dyer, the company's owner, said that the service was aimed at new users.

"I think all of the Internet will go this way," he said. "Although I'm not sure when the larger service providers will start slashing their prices. You need to be a lean company to offer a service as competitive as this."

Mr Dyer told *Practical Internet* that the service would be funded by the taking a small percentage of two telcos' revenue from 0845 numbers, and that around 300 people a day were signing up.

The major service providers do not seem unduly worried by the appearance of these new ISPs, though. AOL, Britain's largest service provider, focused on the ease of setting up one of its accounts and its online services as the main differences between itself and the new cheap or free competition. "With AOL, convenience and ease-of-use are the key factors" a spokesperson told us. "A series of simple steps get members online in minutes. The other element missing from these services is any sense of community or interaction. Chat rooms and message boards are probably the most popular features on AOL - we make it easy to meet and talk to other members worldwide."

NEWS SPORT WHAT'S ON FUN KNOWLEDGE MONEY SHOPPING TALK **INTERNET**

"Who will guide me through the Internet?"

Don't end up all at sea on the Internet. LineOne, the UK information and entertainment service, will steer you in the right direction. LineOne gives you fast and easy access to the Internet, and the home page directs you straight to the subject you're interested in, whether it's news, sport, money, business, education, fun, travel, shopping or what's on. You'll find content exclusive to LineOne and links to the best websites – and you can even personalise the service so that it will find information for you. Your first month's membership is free, after which LineOne is available from as little as £4.95 a month. From then on it's just plain sailing.

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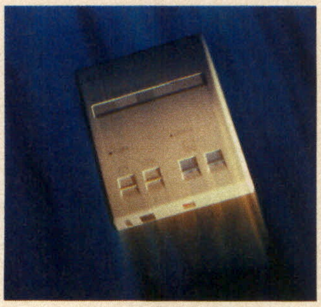
It's what you want to know

BT TAKES THE HIGH ROAD

EVERY HOME TO HAVE DIGITAL SERVICE WITHIN FIVE YEARS



BT HAS ANNOUNCED a digital communications service that allows customers to browse the Internet at high speeds and use the telephone simultaneously over their existing line. Home Highway will offer users speeds of up to 128 kilobits per second with the new digital connection.

Mohebbi: "It's about speed and flexibility"

"This is the first step towards mass digitisation, so everyone can take part in the digital revolution," said Afshin Mohebbi, MD of BT's Business Division. "It's about speed and flexibility and not so much about the technology. You won't need to be a rocket scientist to use it."

A special wall-mounted box is fitted to a domestic telephone line in the user's home and this splits the copper wire four ways.

It has two analogue channels that can be used for voice and fax traffic, and two digital channels that can be used for PC to Net connectivity – each of which offers speeds of up to 64 kilobits per second.

Customers will be able to combine the two digital data channels to reach speeds of 128 kilobits per second.

The price you pay

BT aims to install Home Highway into every household within five years. However, the service does not come cheap. BT charges a converting fee of between £116.33 (incl. VAT) and £175.08 (incl. VAT). There is also a monthly rental fee of between £27 and £40. When questioned about the price a BT spokesman could only say, "for the value that is provided the price is fair."

BT claims that the service is easy to use. However, if you already have a PC you will have to fit an ISDN card (costing from £50). Highway-ready computers will be in the shops by Christmas time.

Highway will offer speeds of up to 128k

BT is promoting the Home Highway as a way of multitasking; you will be able to send/receive emails or use the Net and make/receive telephone calls simultaneously.

Where Highway will undoubtedly succeed is in the speed it can offer – 128 kilobits per second. This will make accessing the Internet much faster and will allow for vastly improved performance with multiplayer Internet games and video conferancing. For more information see **http://www.highway.bt.com/**.

BT FACTS:

- 90 per cent of all traffic is voice calls
- 10 per cent is data traffic
- 1.5 million people work on a regular basis from home.
- 27 per cent (6 million) of households in the UK has PCs (It's about 43-45 per cent in the States).
- 1.8 million UK households are connected to the Internet.

09/06/98 08:45:24

Webcam of the month

TURTLE FARM WEBCAM

http://www.turtle.ky/webcam.htm

THIS MONTH'S WEBCAM comes from The Cayman Turtle Farm in the British West Indies. There are views of the man-made beach where the turtles lay their eggs and the main pool where the farm's "breeder turtles," live – some are estimated to be 60 years' old and weigh up to 650lbs. You can also see the hatching tanks and, on the far right of the picture, the Caribbean Sea.

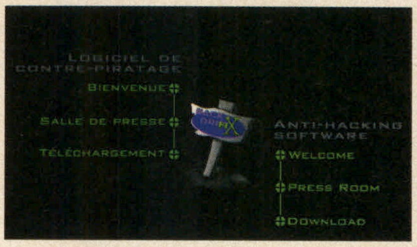
Apparently, this is one of Grand Cayman's main tourist attractions, and has more than 300,000 visitors every year.

So, if you're at a loss for something to do next time you're on Grand Cayman, you know where to go.

DEAD COWS ATTACK WINDOWS

A GROUP OF computer hackers that calls itself the Cult of the Dead Cows has unleashed a powerful new hacking tool called Back Orifice that attacks Windows-based systems.

Using Back Orifice, it is possible for a hacker to secretly monitor what you type on your keyboard, and read and remove files from your hard drive. It only works, though, if you're using Windows and are connected to the Internet, and have unknowingly installed the program.



Back Orifice is a Trojan Horse, a seemingly innocuous program that is often sent as an attachment to an email. If a user runs the attachment, he installs the software on his machine. If he then clicks on a Web-site address included in the email, the user gives an attacker his unique Internet address, making himself vulnerable.

A Canadian-based company called GroupaXion (**http://www.groupaxion.com/**) has developed a program to remedy the problem. A spokesman for the company said, "It's the first time that a Trojan Horse has been able to take control of your whole computer." He described Back Orifice as "even more alarming than the Year-2000 bug."

In the past, most viruses were of the boot or application variety, and were spread by floppy disks. Today, most are "macro viruses," attaching themselves to word-processing and spreadsheet documents.

NETALIA INTERNET

What's an ISP?
Internet Service Provider. A company that provides your connection to the Internet.

Netalia Internet are pleased to announce their ISP service

WE CAN NOW OFFER A STANDALONE ISP SERVICE, DOMAIN NAME REGISTRATION, WEB SITE HOSTING OR ANY COMBINATION TO SUIT YOU.

We provide an analogue or ISDN internet connection from under £10 per month, or £95 per year, with unlimited access and your own E-mail addresses.

KISS THE GIRLS

DANI BEHR AND JO Guest were recently on hand to launch Kiss 100's new dance music Web site. The former presenter of The Word and the Page 3 'stunner' took part in a live radio broadcast in a bid to plug the London-based station's new site.

"The site is targeted at 15-24 year-olds who are fans of dance music," Neil Russell, manager at Kiss told us from the celebrity bash at London's Cyberia cafe. "The aim is to reflect the Kiss brand. It's not just an extension of the radio station and you won't see loads of photos of smiley DJs that you get on other radio sites."

Created by Web design company Traffic, Kiss's singles charts form the backbone of the site and users can listen to sound clips in RealAudio. There is also a Flash-based game called the Four Temptations of Sweet Bill Nothing. You have to save Billy from over indulgence in his dubious vices of sex, drugs and blow up dolls!

The site can be viewed at **http://www.kiss100.com.**

10 cheapest ISPs

...or how to get more Net for your notes

1= X-STREAM NETWORK	0870 730 6466	Free
1= CONNECT FREE	0702 115 2525	Free
3 MESSAGES	0702 096 6442	£49.95 (life)
4 ONET	0800 980 6998	£99.29 (life)
5 FREE.NET	0181 568 3377	£30.00 (two yrs)
6 IAX	01932 403020	£46.94
7 PORTHILL	0702 110 1200	£47.88
8 INFOTRADE	0800 226600	£69.88
9 SURFLINK	0800 243777	£85.00
10 DIALUK NET	01329 513513	£96.35

Rates are based on a full year's subscription for unlimited use. Prices include set-up costs. Additional inclusive services will vary. To qualify, a service provider must offer national coverage at local call rates. Information is taken from our service provider listings starting on page 97. If you know of anyone cheaper, please email pi@paragon.co.uk.

GUEST APPEARANCE

JO GUEST TOOK time out from being snapped by the assembled paparazzi to talk to *Practical Internet* and proved that she was no brainless bimbo when it came to surfing the Net.

"I'm quite computer literate, but some of the slashes and colons in the site names do confuse me a little," she told us.

She said that her understanding of the Internet has grown recently, as she has become more involved in her Web site (**http://www.joguest.co.uk**), which is to be re-launched in new next few weeks. The site contains exclusive pictures that can be viewed for a subscription fee.

"New pictures will be put on the site every two weeks. I also carry a digital camera with me everywhere I go and take pictures of the people I meet."

Jo also writes a diary online, and she welcomes the ability to talk to her fans directly. "I write the diary myself and nobody changes it. In that way it's more personal and no journalist edits it."

When she is not busy modelling for *The Sun* or doing interviews Jo admits to using the Internet herself. "I can spend hours chatting away on AOL. I'm user name 'something.' But I'm not telling any of your readers what that 'something' is!"

Email your ideas of what Jo's AOL screen name is to pi@paragon.co.uk.

Your wait is over: Netalia Internet now brings you

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- Newsgroups
- Microsoft FrontPage 98™ Support

ISDN Feature: 10% Discount for Single User Dial-Up Clients

HOP ON BOARD THE BIG REDBUS

YOU HAVE A brilliant idea for an online business, but there is just one thing that is stopping you from launching – money. You go to your friendly bank manager, but he won't even look at your proposal. So what do you do now?

Well you could try borrowing some cash off Cliff Stanford. The former Demon boss has set up a company called Redbus, which will offer venture capital to people with original ideas.

"Businesses have many tough challenges throughout their life-span, but none are bigger than the start up phase itself," writes Stanford in a company brochure. "Whilst an innovative idea is undoubtedly the foundation for a successful business, it takes a great deal more to turn it into a solid platform for future growth."

Stanford offers up himself as a shining example of what can be achieved. He formed Demon with just £20,000 in 1992. Six years later he sold it for £66 million.

Redbus will provide services such as advertising, business management, financial analysis etc., in addition to a injection of capital. Backing will be given to original ideas, which won't necessarily have to be Internet or technology related.

See **http://www.redbus.co.uk** for further information.

HIRE A HACKER

COMPANIES CAN NOW test their network defences by calling in a team of expert hackers to carry out non-hostile Internet-based attacks. Security consultant specialist CenturyCom is hiring out experienced consultants to attack company defences, carrying out penetration testing on systems by attempting to hack into given areas. This will allow a company to pinpoint holes in its security policies, check staff reaction times to breaches in defence, and examine the impact of unauthorised access to confidential data.

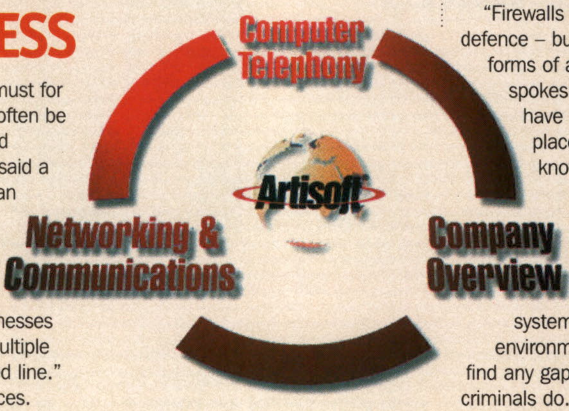
"Firewalls are effective forms of defence – but only against certain forms of attack," said a company spokesman. "Most companies have a security policy in place, but nobody quite knows how effective their defences are until somebody tries to breach them. By attempting to hack our way into protected systems in a controlled environment, we can hopefully find any gaps before the real criminals do."

MULTIPLE INTERNET ACCESS

ARTISOFT HAS LAUNCHED the latest version of its software that enables networked PC users to browse different Web sites at the same time via one Internet connection.

iShare 3.0 enables up to 32 networked PC users to browse different Web sites at the same time via one Internet connection. This latest version runs up to 300 per cent faster than previous versions and now supports Windows 98 and Windows NT 4.0.

"Whilst the Internet is a must for any business, the cost can often be too great for some small and medium sized companies," said a spokesman. "iShare 3.0 is an affordable and cost effective way of allowing Internet access to anyone on a LAN from only one connection. This saves businesses the expense of paying for multiple Internet accounts or a leased line." Call **01634 304107** for prices.



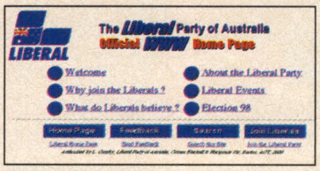
ELECTION SITE VANDALISED

ON THE OPENING day of the Australian election campaign hackers managed to break into the Liberal Party's Web site and make a number of amusing changes.

Incumbent Prime Minister John Howard became "The Dishonourable John Howard MP: Prime Minister for Pain, Suffering and Inequity." Treasurer Peter Costello became "Minister for the Rich, Stomping the Poor and Wrecking the Economy." And Foreign Minister Alexander Downer was recast as the "Minister for Foreign Humiliation."

According to security consultants there are a number of ways the hackers could have accessed and changed the Web site. Permission to alter the content on the Web site could have been achieved through flaws in the Web server, Web site scripts and the underlying operating system.

(Newsbytes 28/8/98).



LIBERAL

The Liberal Party of Australia
Official WWW Home Page

- Welcome
- Why join the Liberals ?
- What do Liberals believe ?
- About the Liberal Party
- Liberal Events
- Election 98

NAMING NAMES

BUSINESSES LOOKING TO stake a claim on the Internet will now be able to recover stolen domain names thanks to Netnames (http://www. netnames.co.uk). The company has just launched a Global Recovery Service (GRS), which aims to prevent domain names from being registered by non-authorised third-parties.

Companies will benefit from Netnames' knowledge of domain registering regulations along with a counsel of 60 attorneys worldwide. "As the Internet rapidly expands, there is a greater need for companies to protect their tradename on the Internet. The GRS provides a complete solution that combines Internet expertise and legal counsel at an affordable price," said a spokesman.

WHAT IF THE COMPANY YOU KEPT WASN'T YOURS?
net names
CHECK NO ONE ELSE OWNS YOUR DOMAIN NAME - NOW

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- Web Statistics
- Web space
- Unlimited Email Addresses
- Secure server with certificates
- Microsoft FrontPage 98™ support

Database with Real Time Web Connection

All package prices include Domain registration charges

EXCITE GETS LOCAL

SEARCH DIRECTORY, EXCITE (**http://www.excite.co.uk**) has announced that it is to offer a localised version of its free Web-based email service for the UK. Visitors to the site who register can send and receive their own personal email from a unique .co.uk address of their choosing.

The move forms part of an growing trend by search directories (Yahoo!) and OSPs (CompuServe, AOL and MSN) to offer what has become known as a 'portal' service. By this they mean that they aim to offer content such as news, weather reports and community services, which can be personalised to users' preferences and their local area.

George Bell, President of Excite

OFTEL GIVES BT GREEN LIGHT FOR CLICK SERVICE

THE BT CLICK Internet service has been given the go-ahead by Oftel, the UK's telephone regulator. This comes despite complaints from some ISPs about the 'pay as you go' service. Oftel says that it is not planning to intervene as the move is "a commercial decision for BT."

BT Click offers direct access to the Internet without the need to subscribe to a service provider. A trial of the new service has taken place in Northern Ireland and is to be offered nationally in October.

It's anticipated that customers will pay as little as a penny a minute additional charge on BT's standard local calls. The service will be of particular interest to those wishing to get a taster of the Internet, or for people who spend less than 10 hours a week online.

The start-up software will be available from BT or downloaded directly from the Internet.

A number of ISPs have complained that BT may be using its strong position as a telco to improve its place in the ISP market. In June, Ben Knox of Direct Connection said that BT could use the scheme to monitor the amount of time that people spend online and use it for marketing purposes. "If people go above a certain time limit, I wouldn't be surprised if BT inserted into customer's bills an advert for BT Internet [BT's subscription based service] recommending that they join it," he said

See **http://www.click.bt.com** for more information.

BTclick

WEB-BASED EMAIL HACKED

WEB-BASED EMAIL FIRMS such as Yahoo! and Hotmail are taking steps to protect their users against a password-stealing bug. However, it may well be all in vain as a Canadian Web programmer has shown how a JavasSript code could fool a user into revealing their password.

Tom Cervenka demonstrated on his Web site (**http://www.because-we-can.com**) how a simple email message containing a few lines of JavaScript code could allow access to Hotmail and Yahoo! Mail users passwords.

"Yahoo! Mail said they already filter out JavaScript," he said. "But with a little modification, the current exploit can sneak in the same way as it does with Hotmail."

The trick, which Cervenka calls 'Hot' Mail, alters the Web-based account's user interface with JavaScript. The next time the user clicks on a link, a fake time-out message appears, requesting the user name and password. After the user returns to the normal email interface, the password is then sent to a rogue user.

Both companies now say that the security hole has been closed.

hotmail™ from Microsoft

Your Hotmail is now safe

Y?

because-we-can.com

In the news

The latest newsgroups to hit the Usenet forum

- alt.acorn.demos
- alt.books.electronic
- alt.books.tom-holt
- alt.cult-movies.zombies
- alt.culture.arabic.non-politics
- alt.culture.hongkong
- alt.culture.malawi
- alt.culture.vampires
- alt.culture.zaire
- alt.culture.zambia
- alt.family-names.gendreau
- alt.fan.ninja
- alt.fan.prozac
- alt.fan.stanley-matthews
- alt.fan.will-smith
- alt.fan.william-burroughs
- alt.games.cheats
- alt.irc-progs.virc
- alt.irc.digi-98
- alt.lang.basic.compiler
- alt.music.doors
- alt.music.piano-technician
- alt.politics.the-revolution
- alt.prisoner.rights
- alt.radio.international
- alt.tv.jerry-springer
- alt.windows98
- biz.marketplace.investors
- comp.lang.perl.moderated
- uk.adverts.computer.mac
- uk.games.fantasy.football
- uk.local.warwickshire
- uk.sport.football

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NETALIA INTERNET

GEOCITIES GOES PUBLIC

FREE WEB SPACE provider GeoCities (**http://www.geocities.com**) has joined the likes of Excite, Lycos and Infoseek and is become a publicly owned company. On 11 August 1998, GeoCities offered 4.75 million shares of common stock at $17 per share on the Nasdaq National Market.

"Since December of 1994, GeoCities has grown to be the world's largest community of personal Web sites with 2.3 million members or 'Homesteaders,' who have created over 17 million pages of content on the site," said a spokesman.

GeoCities was the third most popular Web site in the world among home users in June 1998. This has prompted Yahoo! and Intel amongst others to invest heavily in the company over the years.

But GeoCities very impressive success has not been without its problems. Last year, in a bid to raise its advertising revenue, the company introduced a system of pop-up adverts that appeared whenever a visitor accessed a GeoCities page for the first time. In June this year, a 'watermark' that linked to the main GeoCities page was added to the bottom right-hand corner of users Web pages. This was an attempt by the company to attract new business.

Both changes caused uproar among many of GeoCities' users, who claimed it was intrusive and that it blocked some features on their pages. Some of the company's more militant users protested by blackening their pages, while others even threatened to leave the service completely.

Join GeoCities

Welcome to
GeoCities

BT INTERNET CELEBRATES 150,000 USERS

BT INTERNET HAS celebrated its 150,000th customer. Furthermore, the company is giving customers an extra 5MB of Web space to either build their own Web site or supplement their existing one. See **http://www.btinternet.com** for more information.

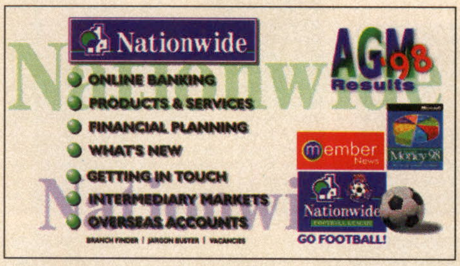
BT Internet
Brings you closer

SEVEN MILLION WILL BANK ONLINE BY 2003

SEVEN MILLION UK consumers will make use of online banking by 2003, according to new research. A report from analysts Fletcher Research claims that High Street banks may lose ground in the online market, in the face of competition from the US, as well as from other personal finance companies in the UK – especially in the insurance and broking markets.

Many Web sites of UK banking and finance organisations are poorly designed, with 22 per cent lacking even an email link to the company, the report said. Most (80 per cent) do not allow any kind of online transactions. Only 0.3 per cent of the UK population currently bank online, compared to 2.4 per cent in Germany and over three per cent in the Netherlands.

The report added that digital TV will be crucial to driving more people on to the Net, and into using online banking. The winners in the UK are most likely to be Citibank, Nationwide, and the Co-operative Bank, with the big four high street banks lagging behind, especially NatWest and Lloyds.



The CO-OPERATIVE BANK
Accounts & Services
About the Bank
internet banking
there's no easier way to bank
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Accessing the Bank

Depressed? not us! Geoff Harris argues against Net stereotypes

Sounding off

THERE'S A NEW stereotype for Internet users – the miserable git. At least that's the implication of a two-year survey of nearly 100 American families with Net access. The survey reveals that spending just a few hours a week online appears to leave people feeling more isolated, lonely and depressed.

According to the survey organisers, Dr Robert Kraut and colleagues at Carnegie Mellon University in the US, the more time respondents spent on the Net, the higher they scored in measures of loneliness and depression. Furthermore, the survey participants suggested that they were spending more time interacting with the Net than with family and friends.

Teens appeared to be particularly vulnerable to modem-inspired moodiness, Kraut reported in the American Psychologist. There's been quite a lot written about this story, but what strikes me is the way the researchers have drawn global conclusions from some pretty partial evidence. One hundred families may sound a lot, but the findings can hardly be said to be representative of the 50 million or so Americans now online. A survey of *10,000 families* and we may have some data worth dealing with. As for the teenagers – well, it doesn't take much to sink them into self-indulgent sloughs of despond, as Joy Division and goth bands have found to their profit. And anyway, most of them are probably only too glad to be online and away from their revision or nosy/embarrassing parents.

> ***Come off it Dr Kraut. According to another, bigger survey, this time done in the UK on behalf of Intel, respondents are very upbeat about PCs and the Net...***

I think this story is the flip-side of the recent Internet addiction scares. Not only is the Net addictive, it does your head in and you lose all your mates. Maybe your hair falls out and you go blind from 'interacting' with all that porn, too. It's further evidence of the backlash against the Internet hype of the last few years, which in some ways isn't a bad thing.

That's not to say the Internet doesn't make me miserable some times – BT's creaking infrastructure, spam and Web-design luvvies who bloat their sites with pointless 'multimedia' all get my goat. But to claim that going online for a couple of hours a week makes you more prone to depression? Come off it, Dr Kraut. According to another, bigger survey, this time done in the UK on behalf of Intel, respondents are very upbeat about PCs and the Net – indeed, 43 per cent of those surveyed agreed that people who were unwilling to use a computer would "probably miss out on many opportunities." Furthermore, only 40 per cent of women surveyed felt that spending long hours on a computer and not going out very much was "nerd-like." Of course, spending day after day cooped up in front of a PC is probably not good for you, but we don't need a bunch of psychologists to tell us this. Anyway, I have to go now – it's time for my Prozac!

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Civilised behaviour

I was disappointed to see you thought that Arthur Wardell's letter 'No Net Control' worthy of your letter of the month. Mr Wardell is profoundly confused about 'freedom of speech' and (I think) confuses it with 'freedom of opinion.'

He says; "no one has the right to play cultural imperialist and suppress views at odds with one's own culture or value system." A dictionary definition of culture will talk about a 'particular form of intellectual development or civilisation,' and civilisation is defined as an 'advanced stage in social development.'

The essential freedoms (probably best defined in the American Constitution) are all about a civilised approach to dealing with people around you. There is nothing civilised about expecting to be allowed to say absolutely anything despite other people's sensitivities (e.g. pornography, racism, etc.) A civilised person restricts their own responses to those which are equally acceptable to the rest of the group. These restrictions are accepted as part of being civilised. Mr Wardell is virtually saying that he has no interest in anyone else's feelings and is unwilling to conduct himself in a civilised manner. In addition, I don't think it is possible for one person alone to speak about having a culture.

George Steele

Better browsing?

I would like to thank you and your staff for a truly excellent magazine. I appreciate being led by the hand through some of the most mundane procedures, which are new to me, without ever feeling that I am being talked down to. A lot of my browsing is done through finding a parent directory and downloading images. I have been using IE 4 as this is often recommended.

I recently experimented by running IE 4 and Navigator 3 side–by–side on the screen and made them load the same images. Navigator 3 was faster picking up the images and miles faster returning to the index! It may be an idea if others tried to same thing. Depending on how you surf, you may find one browser far more suitable and it could save you a lot of money.

Rowan Bouy

Modern modems

In the description of voice modems ['Get more from your modem' issue 18] you make mention of an outgoing program negotiating with a program monitoring input using TAPI, but what happens when you want to monitor for a variety of different calls on the same line? And can the fax software pick up if the call has been answered by a normal phone? Does CLI know if it's a fax call? (I've not got a voice modem yet but I am considering it when I get round to upgrading.)

Peter Pratten

Data, fax and voice calls are now different enough for fax/voice modems to distinguish between them. The fax modem can be set to respond in various ways but normally your PC will handle all calls, including voice, unless you pick it up on a manual phone first. So you'd have to set the fax modem to answer after a certain number of rings, like an answerphone. If you don't get to it in time, the PC takes the call and deals with it, whatever type it is.

CLI is independent of the nature of the call, it's a separate protocol. If the CLI is known you can get it regardless of what's on the other end.

Letter of the month WINS a year on the Net with Primex

LETTER OF THE MONTH

It's good to pay

I refer to Mr Kuc's response to your article specifically regarding Hotmail and the 'local calls should be free' argument. I'm pretty new to this Internet lark, but I have found that the quickest time to surf is early in the morning. I know this comes as no surprise to anyone since the reason that it is so slow later in the day is that half the West coast of America is online by then. And why oh why should this be so? Because they get free local calls.

My point is that either the system gets better, or by us having free local calls, we will surely be creating a Europe–wide go–slow area.

Of course, the whole thing is a trade off. If my time is worth £20 per hour, then I would rather spend 6 pence per minute than nothing, if I can access 2 hours' worth of information (for free) in 20 minutes. Obviously, the £1.20 that the call costs is offset by the one and two–thirds of an hour saved at £20 per hour.

The best of both worlds would obviously be free calls and quick access.

If I'm right, and given the choice, I would rather have fast access over free calls.

Obviously, if you use the Net for things other than surfing, then I agree with the premise, but since I only use the Net for research I'm sticking with the line cost.

Craig Karlson

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ISP OF THE MONTH April 98 internet magazine

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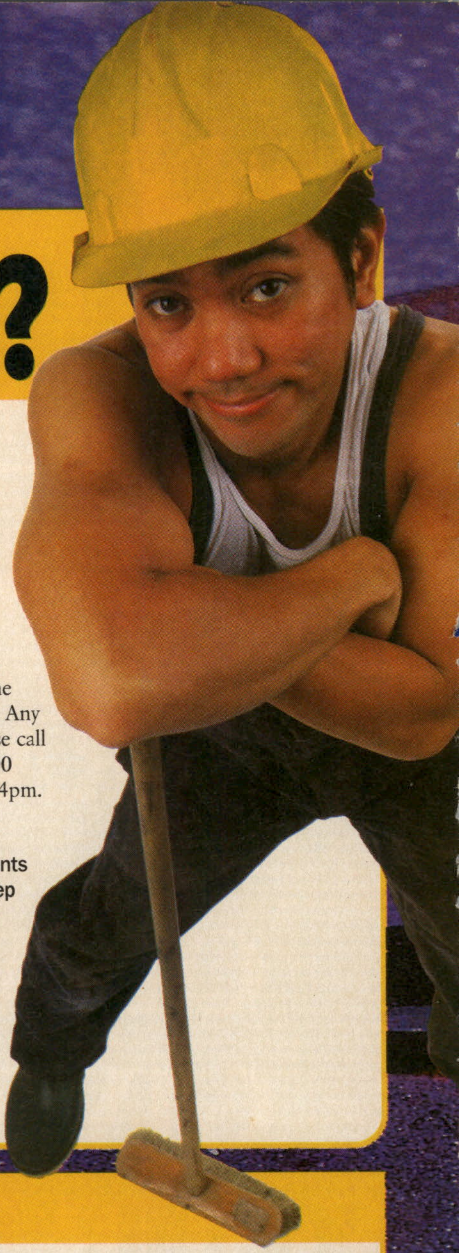
What's on the disc?



This month, we bring you the finest Web authoring packages, along with a selection of trial Internet accounts

Whether you already have a Web site of your own, or you haven't yet got around to creating one, this month's CD-ROM contains software that is certain to help. There are beginner friendly programs, as well as stuff for the more experienced user, and we've supplied software for both Macs and PCs. The chances are, you've already got some free Web space with your service provider, and if not you can get a load from one of the free space providers such as GeoCities (**http://www.geocities.com**). So now there's no excuse for not making your mark on the Web. Once your home page is up and running, email **pi@paragon.co.uk** and we'll try to feature it in our regular 'Home improvement' section, as well as giving you tips and pointers on how to improve the overall design of your site.

You'll notice that there are also trial accounts from various service providers on the CD. You're under no obligation to sign up with these companies, so why not try the services out and compare them with your present ISP?

The CD supplied will autorun in Windows 95/98. If not, simply choose 'Run' and then type in X:\prin20.exe (where X is the letter corresponding to your CD drive) before pressing 'Return.'

Win 3.x users can access the files through the 'File Manager.'

Mac users should double-click the CD icon that appears on the desktop and then choose from the programs that appear.

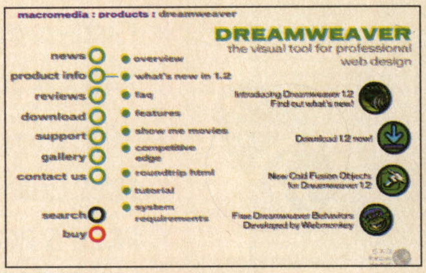
If you have any problems with getting your ISP accounts running, please call the numbers listed on the relevant disc page in the magazine. Any other problems with the disc, please call our disc help line on 01202 299900 extension 259 between 10am and 4pm.

PLEASE NOTE:

WHEN SETTING UP the trial accounts and software on the CD, don't keep installing different versions of Internet Explorer on top of one another. Before you install a new version, always uninstall the previous one. This is done via the 'Add/Remove Programs' function.

***Disclaimer** All software on this CD is strenuously tested for known bugs and viruses. Paragon Publishing will not accept liability or responsibility for loss or damage that occurs directly or indirectly from usage of this disc. We will replace discs that have been damaged in transit or at the place of duplication, upon return to our offices.*

DREAMWEAVER 1.2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tutorial
system requirements
Introducing Dreamweaver 1.2 Find out what's new!
Download 1.2 now!
New Cold Fusion Objects for Dreamweaver 1.2
Free Dreamweaver Behaviors Developed by Webmonkey

THIS 30-DAY TRIAL version of Macromedia's excellent Dreamweaver package is incredibly easy to use and very flexible. It's ideal for both professional designers, and also for anyone creating personal home pages, as the software can be used at a level of complexity that you're comfortable with.

The main interface is WYSIWYG (What you see is what you get), but it's also possible to view your HTML code alongside the window, to tweak it as you work. There are some useful help files with the software, and the good news for high-end designers is that Dreamweaver is able to handle all the latest Dynamic HTML extensions and implement it in such a way so the pages behave the same in different browsers.

For anyone who wants a Web page immediately, the pre-formatted templates are very useful. Simply choose a template and then adjust the text and images as required. More help is available from the documentation included, and you can connect to Dreamweaver online as well.

While this may not be the cheapest Web-authoring package on the market, its power, combined with flexibility, make it well worth considering.

macromedia
DREAMWEAVER
macromedia

Product:	Dreamweaver 1.2
Platform:	Mac, Win 95/98
Price:	$299 (via Web)
Web:	http://www.dreamweaver.com

HOMESITE 3.0

IT'S THE PROGRAM used in this month's free cover-mounted book –*The Site Builder's Manual*, so you'll need to install this 30-day trial of Allaire's HomeSite before you can get started.

HomeSite is a text-based editor that gives you a lot of control over the look of your pages and, because the HTML is always in view, it helps you to learn the way the tags work as you put your site together.

HTML creation is speedier, as the Tag Completion option automatically inserts the closing tag when you type the opening one. Tag Tips appear while you type, telling you which attributes are available for each tag.

HomeSite 3.0 comes with a number of colour palettes, including a browser-safe set. You can click a menu to select a shade and then drop the hexadecimal value into your HTML code.

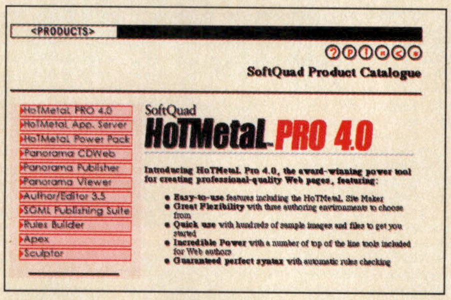
You can customise all the toolbars and add new ones of your own, the extended search-and-replace feature allows replacements across entire directories and subfolders, and the graphics viewer lets you peruse thumbnails of all the images in a directory and drag them into the page.

HomeSite also has a great built-in FTP service that lets you work directly with files on a live Web site as if they were in a local directory. Just make some changes, and the page updates instantly when you save. Very good value for money.

HOMESITE
version 3.0
Return to Products
Overview
Tour
Features
FAQ
Press Reviews
Customer Testimonials
History
Industry Partners
HomeSite DevCenter
Training
HOMESITE
HTML editing tool

Product:	HomeSite 3.0
Platform:	Win 95
Price:	£65
Web:	http://www.allaire.com/products/homesite/index.cfm

HOTMETAL PRO 4.0



<PRODUCTS>

SoftQuad Product Catalogue

Introducing HoTMetaL Pro 4.0, the award-winning power tool for creating professional-quality Web pages, featuring:

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- **Quick use** with hundreds of sample images and files to get you started
- **Incredible Power** with a number of top of the line tools included for Web authors
- **Guaranteed perfect syntax** with automatic rules checking

SOFTQUAD'S HOTMETAL PRO 4.0 is a feature-rich authoring package that offers you three modes in which to work. First, a WYSIWYG interface that allows you to drag and drop elements into a blank page template, which, with a little time and patience, can be used to create some very impressive pages. Second is a similar interface, but this one shows the HTML tags alongside, which is perfect for learning the code and making changes as you go. The third method is a fully fledged HTML editor, which is the one that most source code junkies will head straight for.

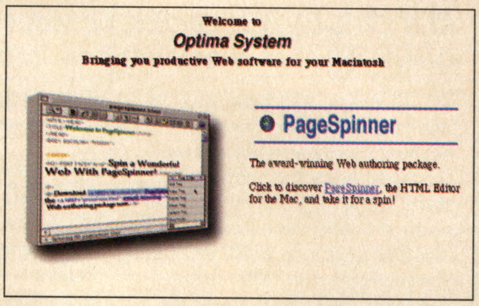
For the novice user, Site Maker is indispensable. It's a sophisticated site creation wizard that takes you through the process of creating a site, step by step. Just specify your preferences for purpose, decor or theme, layout and common content, and Site Maker does the rest, creating a professionally-designed Web site to your specifications.

HoTMetaL PRO 4.0

HoTMetaL has far too many features to cover in this space, and many Webweavers probably won't ever get around to using them all. Which makes the price tag of £99 (excl. VAT) very reasonable indeed.

Product:	HoTMetaL Pro 4.0
Platform:	Win 95/98
Price:	£116.33
Web:	http://www.sq.com/products/pc-hmp4.htm

PAGESPINNER 2.0.1



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PAGESPINNER IS FOR Mac users only, and supports HTML 2.0, HTML 3.2 plus additional Navigator and Explorer extensions. It's useful for both the beginner and the more advanced Web author.

The editor gives you quick access to often-used formatting and also supports interactive help with AppleGuide and an HTML Assistant to help you compose your own Web pages.

AppleScript-based kits for publishing data from applications such as FileMaker Pro, HyperCard, Emailer and Eudora are included.

PageSpinner also supports 'Include' files, enabling you to change common sections on all pages in a folder or a site, simply by editing a single 'Include' file.

In addition, PageSpinner's open architecture for extension plug-ins means you can download new or updated functions, helper applications and examples from the Net.

PageSpinner also includes support for Web technologies such as embedded objects, frames, Cascading Style Sheets, online HTML validation services, Java and JavaScript.

You can use this version for 30 days, and after that you only have to pay a bargain price of $25. For a full tutorial, turn to page 70.

Product:	PageSpinner 2.0.1
Platform:	Mac
Price:	$25
Web:	http://www.optima-system.com/pagespinner

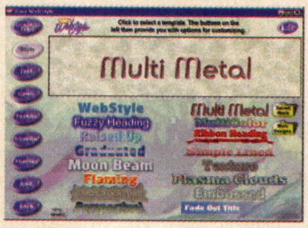
XARA WEBSTYLE

XARA WEBSTYLE LETS you create custom-designed, Web-optimised graphics – buttons, bullets, dividers, 2D and 3D headings and backgrounds – any colour, with any text.

The software is easy to use, so there's no complex graphics software to learn, and no graphics expertise or design skill needed. The results are high-quality, both in terms of the on-screen appearance and the design.

Simply generate graphics by modifying any one of the extensive WebStyle template graphics. These template graphics (designed in CorelXARA and Xara3D) are vector files, which means they can be scaled, re-coloured and have your own text applied without any loss of quality.

The Xara rendering technology means that Xara WebStyle's rendering is fast, and the output is anti-aliased and dithered for the sharpest possible on-screen result. Xara



Click to select a template. The buttons on the left then provide you with options for customising.

WebStyle is ideal for all Web graphics, including 2D and 3D headings, buttons, dividers, bullets and backgrounds. The templates can be customised to suit your own site without any loss of quality – and without the designer's bill.

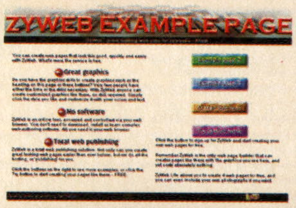
If you are interested in the server-side application of WebStyle, Xara's sister company ZY.com has just released an online version called ZyGraphics Pro which can be found at **http://www.zy.com/zygraphics.**

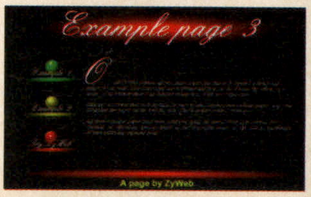
Product:	Xara WebStyle
Platform:	Win 95
Price:	$99
Web:	http://www.xara.com/webstyle

ZYWEB

PERHAPS THE EASIEST way to put a Web page together is ZY.com's new system – ZyWeb. Using ZyWeb, anybody can publish their own Web pages in a few minutes. All you need is a Web browser and a Net connection. ZyWeb is quick and easy to use. You don't have to be a designer or computer expert to create and publish your own Web site and there is no software to download. Simply select a template and then 'pick and click' to customise buttons, change headings, add photos, insert text and then, when you are happy with the results, just click the 'Finish' button to have your masterpiece published on the Web.

Not only will ZyWeb create, publish and host your pages, it will submit them to the major search engines so that people can then find them. What makes ZyWeb stand out is the unique patented graphics technology – you have complete control over the colours, styles and text incorporated into any of the many headings and buttons, even down to choosing the colour of reflected lights used on spinning 3D text. Whenever graphics are created, they are optimised for the Web and anti-aliased to the background you choose for the page. Once you've checked out the demo, try the free version for yourself at **http//www.zy.com/pi**, which allows you to have four Web pages in a choice of 10 template design styles.

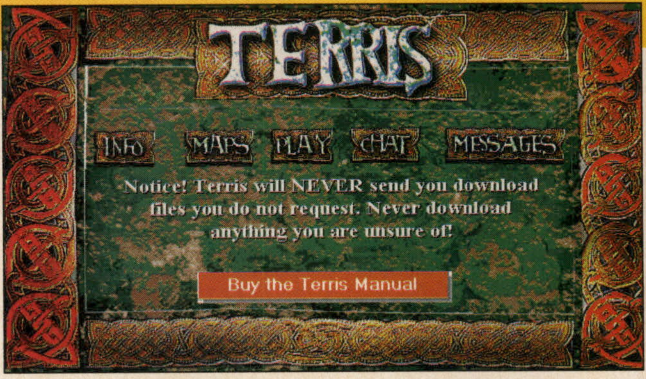




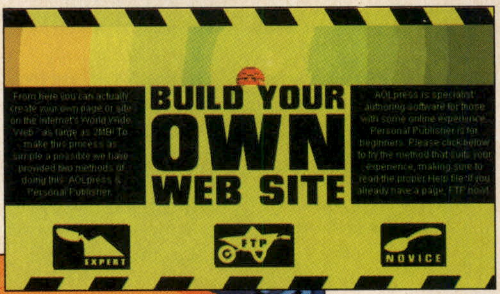
Product:	ZyWeb
Platform:	Runs on the Web
Price:	Home package: £31 pa. Business package: £200 pa
Web:	http//www.zy.com/pi

AOL

The UK's biggest service provider also offers loads of members-only information


TERRIS
INFO
MAPS
PLAY
CHAT
MESSAGES
Buy the Terris Manual

Notice! Terris will NEVER send you download files you do not request. Never download anything you are unsure of!


BUILD YOUR OWN WEB SITE
EXPERT
FTP
NOVICE

From here you can actually create your own page or site on the Internet's World Wide Web - as large as 2MB! To make this process as simple a possible we have provided two methods of doing this: AOLpress & Personal Publisher.

AOLpress is specialist authoring software for those with some online experience. Personal Publisher is for beginners. Please click below to try the method that suits your experience, making sure to read the proper Help file! If you already have a page, FTP now!

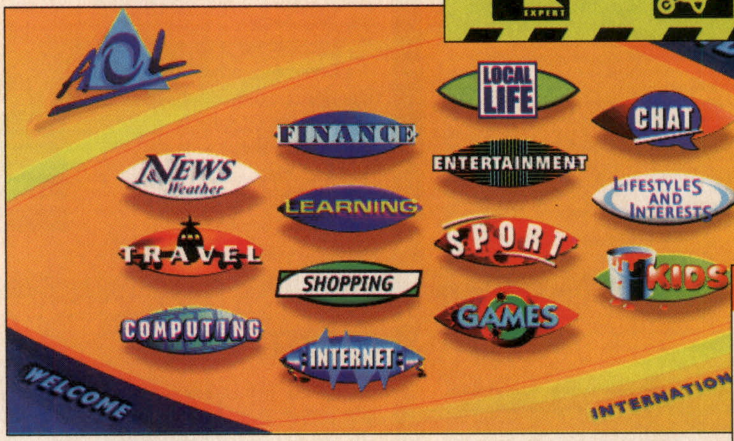
AOL IS A FUN, affordable, easy to use Internet and information service covering everything from the latest news and sports to travel and entertainment, and all of it right up to the minute. It is also the service on which you can communicate with fellow users, and send and receive messages quickly and easily. Like sending a letter but without the wait, or a long distance call for the price of a local one.

AOL has worked to make sure that you have everything you need all in one place – the Internet, email and more. Save yourself time and money by doing everything online – get in touch with friends and family around the world at local BT rates, play exciting multiplayer games, and explore the Internet for information on your favourite hobbies and interests. In short, everything you need in a nutshell.

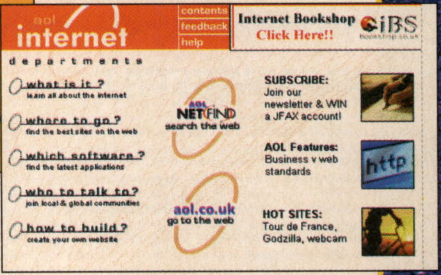
With AOL, you can send and receive email anywhere around the world, and all at local BT rates. And AOL lets you get creative with your email – choose from a huge range of background and text colours. Add bold type and italics. You can send unlimited messages and attach files conveniently to any Internet address in the world, and with five email addresses you'll have no excuses not to keep in touch.

THE LATEST TECHNOLOGY

AOL now has a powerful new search engine called AOL NetFind™ – a very easy, yet comprehensive way to find what you are looking for, fast. Whether you're looking for sound files and graphics, or Web sites for your kids, AOL NetFind™ can help you find it. And with the world-renowned Microsoft Internet Explorer 3.0 as your integrated Web browser, it's easy to explore the Web for all your information needs.


AOL
LOCAL LIFE
CHAT
FINANCE
ENTERTAINMENT
NEWS Weather
LEARNING
LIFESTYLES AND INTERESTS
TRAVEL
SPORT
KIDS
SHOPPING
GAMES
COMPUTING
INTERNET
WELCOME
INTERNATIONAL

Search for:
FIND
AOL NetFind WebGuides
Add my URL to AOL NetFind


aol internet
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departments
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where to go ?
which software ?
who to talk to?
how to build?
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go to the web
http

learn all about the internet

find the best sites on the web

find the latest applications

join local & global communities

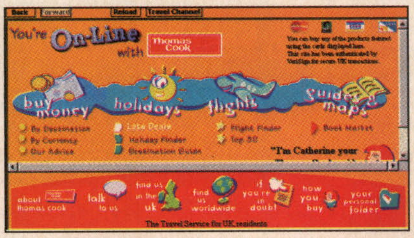
create your own website

SUBSCRIBE: Join our newsletter & WIN a JFAX account!

AOL Features: Business v web standards

HOT SITES: Tour de France, Godzilla, webcam

With your AOL account you are also given 10Mb of Web space, so why not create your own personalised Web site? To make it simple, AOL provides online tools to help you. Try out Keyword: Personal Publisher to get started, or Keyword: AOLPress for more advanced tools.


Back
Forward
Reload
Travel Channel
You're On-Line with Thomas Cook
buy money
holidays
flights
guides & maps
By Destination
By Currency
Our Advice
Late Deals
Holiday Finder
Destination Guide
Flight Finder
Top 50
Book Market
about thomas cook
talk to us
find us in the uk
find us worldwide
if you're in doubt
how you buy
your personal folder

You can buy any of the products featured using the cards displayed here. This site has been authenticated by VeriSign for secure UK transactions.

"I'm Catherine your

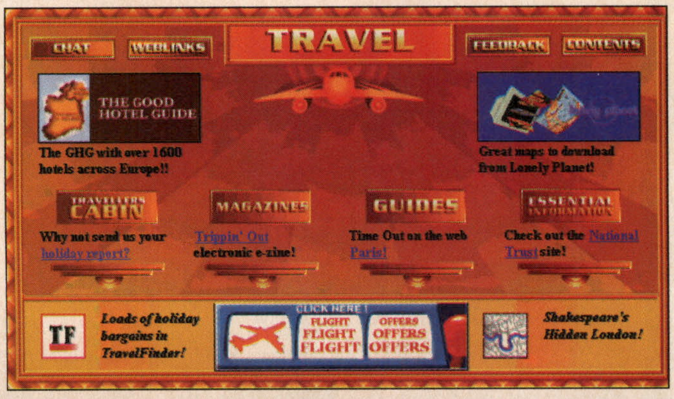
The Travel Service for UK residents

NEW ON AOL

If you've got the travel bug, then it might be worth your while checking out the Thomas Cook online area (Keyword: Travelbargains), which gives daily lists of late availability holidays and flight offers especially for AOL members. You will also find The Good Hotel Guide online, which now boasts over 1,700 reviews of top hotels across Europe and is fully searchable.

Or if you have a keen interest in cars, then the brand new Drive area might be right up your street (Keyword: Car). This area covers the commercial aspect of motoring, with its car showroom and financial advice, and tries to capture the enthusiasm that accompanies car ownership. So whether you are an enthusiast or have a general interest in cars, there will be something here to get your motor running.

Everything you need to get started is on the CD. Simply install the software and enter the code which is printed on the slip of paper inside the CD cover. You'll be online in minutes.


CHAT
WEBLINKS
TRAVEL
FEEDBACK
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THE GOOD HOTEL GUIDE
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FLIGHT FLIGHT FLIGHT
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The GHG with over 1600 hotels across Europe!!

Great maps to download from Lonely Planet!

Why not send us your holiday report?

Trippin' Out electronic e-zine!

Time Out on the web Paris!

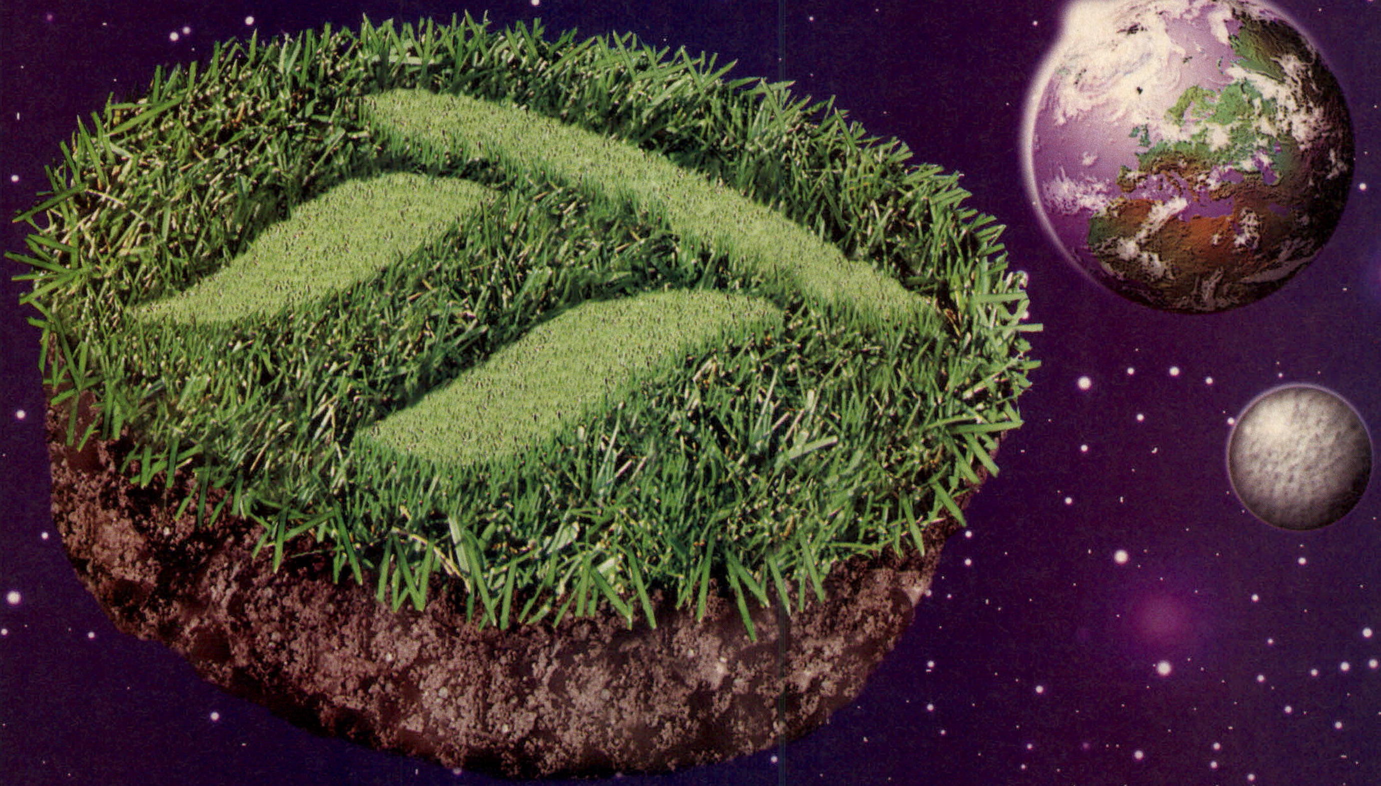
Check out the National Trust site!

Loads of holiday bargains in TravelFinder!

Shakespeare's Hidden London!

Service Provider:	AOL
Free time:	50 hours
Modem speeds:	Up to 56kbps
Technical support:	0800 376 5432
Sales enquiries:	0800 279 1234
Web site:	http://www.aol.co.uk
Monthly rate:	£4.95 for 3 hours per month, additional hours £2.35 each. Unlimited use at £16.95 per month
Annual rate:	£179.40
Platform:	Win 3.x, 95, 98, Mac

PRESTEL - WHERE THE GRASS IS GREENER



At Prestel, we pride ourselves in providing you with the easiest, most cost effective way of connecting to the Internet.

- For just £8.99* per month, we will get you on-line with free PC or Macintosh software and, if you need to speak to someone, our techincal support lines are available 24 hours a day 7 days a week, 365 days a year.
- We will provide you with solid, reliable 33.6k connections or, if you have the right equipment, lightning fast 56k (including V90) and 64k ISDN connections. At no extra charge.
- And if you want to do more than just connect we will also give you FREE unlimited web space, FREE unlimited email addresses, 5 POP3 email boxes and 100% local call access. At no extra charge.

Wish you were here? To get connected now, call:

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ISP OF THE YEAR 97 internet magazine

US Robotics X2 TECHNOLOGY

3Com 56K STANDARD COMPLIANT V.90

ISPA UK

V90

Prestel on-line

BREATHE ON LINE

A new service provider offering attractive rates

FAIRLY NEW TO the Internet service providers' scene, breathe on line is offering subscribers a very good deal – £9.99 per month (incl. VAT).

The price alone makes this an ISP to consider, and if you're using the Net for the first time, breathe on line aims to be very simple and straightforward to use. The company also offers a search engine to help you find your way around the Net, available from the breathe on line Web site.

This is a very good performer, returning results quickly and accurately. There is also a list of users' favourites here, so you can see what other subscribers rate as worth viewing.

OPENING UP THE INTERNET

Another feature worth noting is breathe's Web-based email. This doesn't just limit you to reading your mail while you are at your home PC. The Web-interface on the breathe site allows you to pick up your mail from any computer that is connected to the Internet.

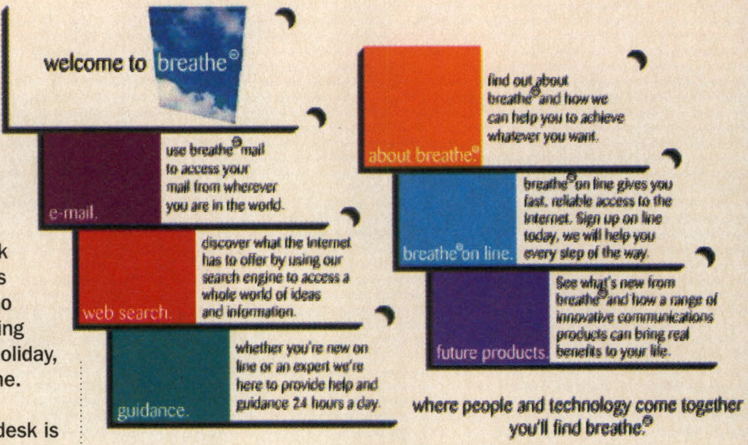
All you need to do is go to the breathe Web site, enter your email username and password and you can then view your mail. Great for people wanting to check their mail at work, business travellers, and students who want to get email both during term time and during the holiday, when they are back at home.

To keep things running smoothly, the breath help desk is open 24 hours a day, 365 days a year. You'll also find a collection of help files on the Web site – in particular, excellent guides to using Internet Explorer 4 and Outlook Express – and a troubleshooting section.

Once online, you'll be able to take advantage of full national access at local call rates, 56k x2 modem speeds (or ISDN access) and 10Mb of free personal Web page space for your online creations – you can even use the space for business use, providing you don't sub-let it to anyone else.

When you've installed the breathe software from our cover CD, call 0800 298 3030, choose your username and password, and you're ready to go.

You'll need your credit card at the ready when you subscribe, but if you sign up with breathe on line, you can still choose to cancel within your first month, and claim a refund.



welcome to breathe®

e-mail. use breathe® mail to access your mail from wherever you are in the world.

web search. discover what the Internet has to offer by using our search engine to access a whole world of ideas and information.

guidance. whether you're new on line or an expert we're here to provide help and guidance 24 hours a day.

about breathe®. find out about breathe® and how we can help you to achieve whatever you want.

breathe® on line. breathe® on line gives you fast, reliable access to the Internet. Sign up on line today, we will help you every step of the way.

future products. See what's new from breathe® and how a range of innovative communications products can bring real benefits to your life.

where people and technology come together you'll find breathe®

Service Provider:	Breathe on line
Free time:	None
Modem speeds:	Up to 56k (x2)
Technical support:	0870 600 6006
Sales enquiries:	0800 298 3030
Web site:	http://www.breathe.co.uk
Monthly rate:	£9.99
Annual rate:	£99
Platform:	Win 95, 98

CLARANET

A service provider which performed consistently well in our user survey

CLARANET HAS BEEN around a while, and ranked well in our user survey (issue 20). It offers full Internet access. unlimited access to email, the World Wide Web, newsgroups and other services for £11.63 per month. If you'd rather just get a taste of the Net, or you know you'll just be sending the odd email every few days, you could opt for the £3.99 (excl. VAT) monthly rate, which allows you three hours use per month.

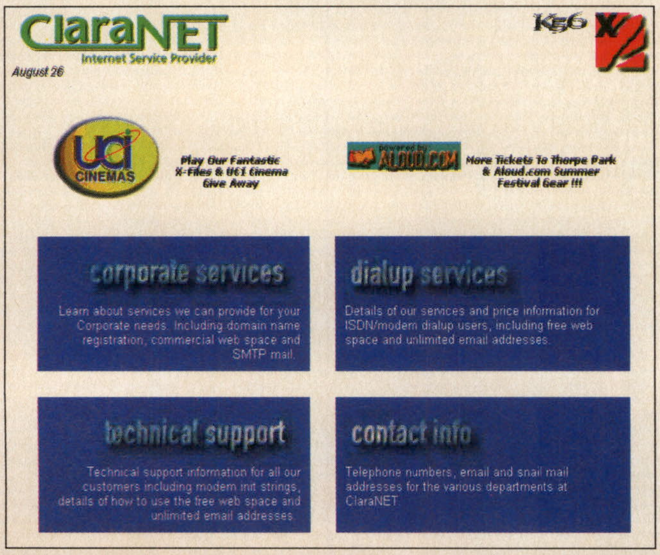
ClaraNET has a very impressive online tech support section that covers subjects including setting up the software, non-Windows set-up information, decoding attachments, email to fax gateways, server addresses, and IRC servers, as well as more specialised areas such as ClaraNET's Cache server, Quake server and Web-mail Interface and how to use the batch FTP Service. But if you can't get online at all, you'll be pleased to know that technical support is available by phone seven days a week, 24 hours a day.

AND THERE'S MORE...

For your home page, there's a full 25Mb of Web space, and for your written communication, an unlimited number of email addresses. Both x2 and K56Flex 56k modem speeds are supported, so there's no need to worry which flavour your modem is. ClaraNET also has its own FTP site, which you can search via a simple form. Here, you'll find games, Net utilities and other programs for PC and Mac available for free download. Members can also upload their own content if they wish.

The Web-mail interface is something that we're starting to see more service providers offer, but many still don't. The advantage of the Web interface is that wherever you are, and whatever computer you're on, you can read and send email from your account simply by logging on with your username and password.

You'll notice that on the CD there are two options when installing the ClaraNET software – either the full installation including Internet Explorer 4, or, if you already have IE 4 you can cut straight to the sign-up screens.



ClaraNET Internet Service Provider

August 26

Play Our Fantastic X-Files & UCI Cinema Give Away

More Tickets To Thorpe Park & Aloud.com Summer Festival Gear !!!

corporate services

Learn about services we can provide for your Corporate needs. Including domain name registration, commercial web space and SMTP mail.

dialup services

Details of our services and price information for ISDN/modem dialup users, including free web space and unlimited email addresses.

technical support

Technical support information for all our customers including modem init strings, details of how to use the free web space and unlimited email addresses.

contact info

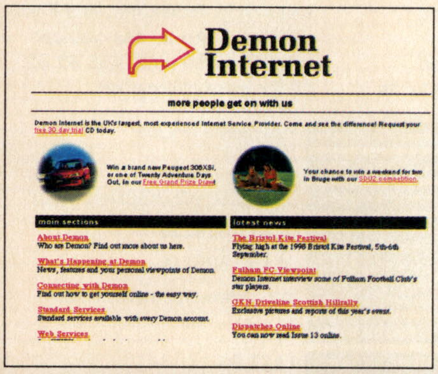
Telephone numbers, email and snail mail addresses for the various departments at ClaraNET.

Service Provider:	ClaraNET
Free time:	30 days
Modem speeds:	Up to 56k (x2, K56Flex)
Technical support:	0845 355 3000
Sales enquiries:	0800 358 2828
Web site:	http://www.clara.net
Monthly rate:	£11.63
Annual rate:	£116.33
Platform:	Win 95, 98

DEMON INTERNET

Fast, cheap Net access with free RealAudio streams for your Web site

WITH OVER 200,000 dial-up subscribers, Demon Internet is a real success story. It gives you unlimited email addresses and 24-hour technical support. The home pages service provides all standard Demon Internet dial-up customers with their own virtual Web server, including 15Mb Web space and a unique URL of the form **http://www.hostname.demon.co.uk/** where hostname is the name you chose for your dial-up account. Even better, you'll get two RealAudio streams to add sound to your site.



Demon Internet

more people get on with us

Demon Internet is the UK's largest, most experienced Internet Service Provider. Come and see the difference! Request your free 30 day trial CD today.

Win a brand new Peugeot 306XSi, or one of Twenty Adventure Days Out, in our Free Grand Prize Draw

Your chance to win a weekend for two in Bruge with our SDU2 competition.

main sections

About Demon
Who are Demon? Find out more about us here.

What's Happening at Demon
News, features and your personal viewpoints of Demon.

Connecting with Demon
Find out how to get yourself online - the easy way.

Standard Services
Standard services available with every Demon account.

Web Services

latest news

The Bristol Kite Festival
Flying high at the 1998 Bristol Kite Festival, 5th-6th September.

Fulham FC Viewpoint
Demon Internet interview some of Fulham Football Club's star players.

GKN Driveline Scottish Hillrally
Exclusive pictures and reports of this year's event.

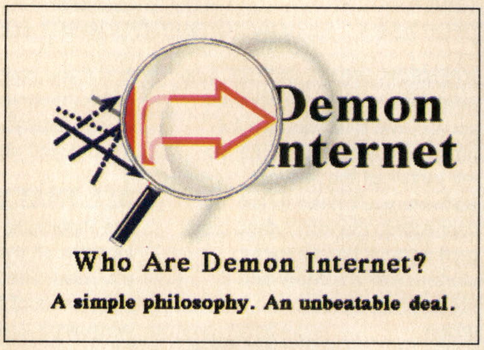
Dispatches Online
You can now read Issue 13 online.

Your personal home page space isn't restricted to personal use, either. Demon is happy for you to use your Web site to promote your business venture if you so choose. This makes it an idea place to test any commercial ideas you have, and if you find that they are successful and you need more server space, Demon can then provide you with a commercial account.

DEMON'S DEDICATION

If you're into online gaming, you'll be pleased to know that Demon has games servers for Quake, Quake II, Unreal, NetStorm and SubSpace, with free access to a dedicated games Web site carrying games info and news.

Demon also offers an ISDN service for the same price as the standard dial-up service – £10 (excl. VAT) per month. And you can access your Demon Internet account using an Orange phone with the appropriate fax and data card and a lap-top computer.



Who Are Demon Internet?

A simple philosophy. An unbeatable deal.

New and existing customers can take advantage of Demon's Dfax technology for a one-off set-up fee of £19.99 (excl. VAT). This email/fax gateway allows you to receive faxes as email, send emails to fax machines, and pick up faxes wherever you are.

For Demon customers, there is also the offer of a free three month trial of LineOne's content, which is especially geared towards UK users. After that, you can claim a reduced rate of £3.20 per month.

Sign up, and you'll also get the Demon quarterly magazine – *Dispatches* – sent to you free of charge. The software supplied is for Windows only. If you need Mac software, call Demon.

Service Provider:	Demon Internet
Free time:	30 days
Modem speeds:	Up to 56k (x2, K56Flex)
Technical support:	0181 371 1010
Sales enquiries:	0181 371 1234
Web site:	http://www.demon.net
Monthly rate:	£11.75
Annual rate:	£141
Platform:	Win 95

NETDIRECT

25Mb of home page space and CGI scripts thrown in – ideal for home page hobbyists

NETDIRECT IS OFFERING 30 days to evaluate its service, and it's a good bet for the budding Web designer, dishing out a whopping 25Mb of Web space, including ready-to-run CGI scripts. Once you've installed and registered the software, you'll have access to 720 hours of Internet use at all modem speeds and standards up to 56k (that means both x2 and K56Flex) or ISDN.

NetDirect also offers seven-day-a-week technical support, should you run into any difficulties. Call 0181 293 7300, send your queries via email to **support@netdirect.net.uk** or see **http://www.netdirect.net.uk/support** on the Web.

As well as straight Net access, your account with NetDirect gives you access to NetDirect Online. This is in the form of 'guided content' to Web sites on the Internet.

It is designed to offer an easy-to-use facility to NetDirect subscribers to surf the Internet and find sites of interest without having to trawl through the thousands of permutations thrown up by the search engines. What's more, this service doesn't carry the added cost to the subscriber of some of the traditional online services.

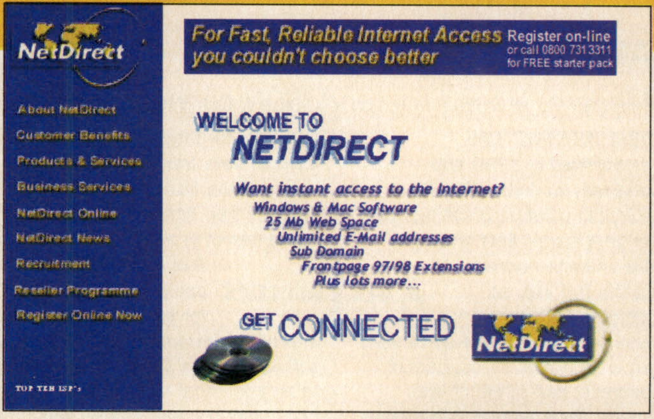
LIVE AND DIRECT

Your trial account also includes one email box, and access at local rates right across the UK. The following additional facilities will become available should you choose to convert to a full subscription:

Free FrontPage 98™ extensions, two free RealAudio/RealVideo streams, free sub-domain for Web space and email, five email boxes, and unlimited email addresses if using a sub-domain.

The CD contains Internet Explorer 4 and 3.02 for Win95 and 3.1. Mac users can call 0800 731 3311 for a free copy of IE 3.

Once installed, log in with a username of 'register' and a password of 'register.' Enter a Web page address of **http://register.netdirect.net.uk** along with the Registration Code: PI0798 and fill in the rest of the details on the registration form. A credit card or debit card is required to participate in the free trial. Customers can also subscribe by cheque/postal order, or by credit card over the phone, but they will not be able to take part in the free trial.



For Fast, Reliable Internet Access you couldn't choose better

Register on-line or call 0800 731 3311 for FREE starter pack

WELCOME TO NETDIRECT

Want instant access to the Internet?
Windows & Mac Software
25 Mb Web Space
Unlimited E-Mail addresses
Sub Domain
Frontpage 97/98 Extensions
Plus lots more...

GET CONNECTED

Cancellations must be received in writing (by email, fax or letter) before the end of the free trial or the subscriber will be automatically charged for a full quarterly subscription of £38.19 on their credit card.

Service Provider:	NetDirect
Free time:	30 days
Modem speeds:	Up to 56k (x2, K56Flex)
Technical support:	0181 293 7300
Sales enquiries:	0800 731 3311
Web site:	http://www.netdirect.net.uk
Quarterly rate:	£38.19
Annual rate:	£126.76
Platform:	Win 3.x, 95, 98 (Call for Mac)

PIPEMEDIA ONLINE

Good news for everyone – a service provider that promises "simply straightforward Internet access"

PIPEMEDIA ONLINE OFFERS a no-obligation seven day unlimited access free trial. Suitable for home or business use, the CD will install all the Internet software you'll need to get connected. You won't need credit card or bank details to get started, just a modem and a phone line connection to register online.

With Pipemedia you access the Internet for a local call rate anywhere in the UK, and it also offers a national call number for any phone company or cable deals you may be able to take advantage of.

Pipemedia is committed to providing speedy Internet access and no engaged tones. But don't just take their word for it; Pipemedia has received consistently good rankings in Internet publications in terms of speed and reliability. If you have a high speed modem, things are better, as Pipemedia offers full speed connections for K56Flex, x2 and V.90 56kbps technologies. And if you have any difficulties, helpful technical support is always available at all times of the day and night.

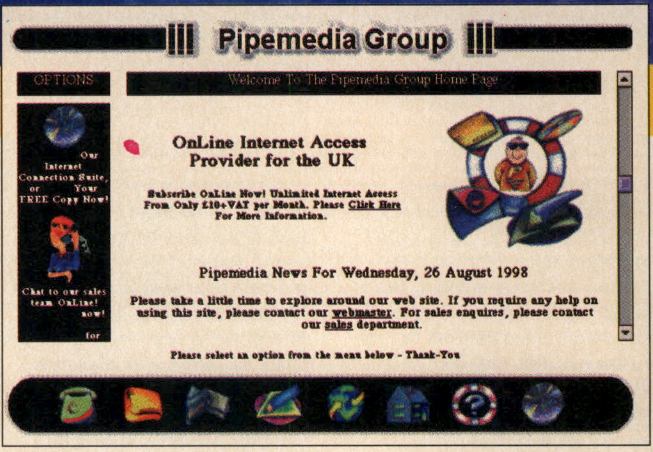
ALL THAT YOU NEED

The Pipemedia installation includes all the free software that you need. The software included is for users of Macintosh, Windows 3.2, 95, 98 and NT. Windows users just run the software from the CD, and click the Install icon to load the latest version of Internet Explorer 4, Outlook Express (for email and news), along with Microsoft Netmeeting and Comic Chat. Mac users just need to click on the Installer icon.

With a Pipemedia subscription you'll also get free Web space, and the option of multiple email accounts. Web designers should note that it is possible to use Microsoft Front Page extensions and Active Server pages on Pipemedia's Web servers. Businesses also benefit from a range of services, such as server hosting, domain name registration, and Web site design. There is also a powerful games server running Unreal and Quake II, which is available free to all Pipemedia subscribers and trial users.

Pipemedia also offers an interactive OnLine system for its own subscribers running through normal Web browser software leaving you free to choose where you want to go on the Net, with full "simply straightforward Internet access."

If you don't want to try the service straight away you can find out more by taking a look at one of the Web site at **http://www.pipemedia.co.uk** or by emailing **sales@pipemedia.net**. And if you don't have Net access, you can call Pipemedia on 01455 82 82 18 for more information.



Our Internet Connection Suite, or Your FREE Copy Now!

Chat to our sales team OnLine! now! for

OnLine Internet Access Provider for the UK

Subscribe OnLine Now! Unlimited Internet Access From Only £10+VAT per Month. Please Click Here For More Information.

Pipemedia News For Wednesday, 26 August 1998

Please take a little time to explore around our web site. If you require any help on using this site, please contact our webmaster. For sales enquires, please contact our sales department.

Please select an option from the menu below - Thank-You

Service Provider:	Pipemedia OnLine
Free time:	7 days
Modem speeds:	Up to 56k (x2, K56Flex, V.90)
Technical support:	01455 828218
Sales enquiries:	01455 828218
Web site:	http://www.pipemedia.co.uk
Monthly rate:	£11.75
Annual rate:	£117.50
Platform:	Win 3.x, 95, 98, NT, Macintosh

ABEL INTERNET

Modem, leased line and ISDN connections

ABEL INTERNET WAS established in 1990 and originally worked with a Pipex subsidiary before breaking away to go it alone. Abel gives you full unlimited access to the Net with no online or extra charges at speeds of up to 56k, an unlimited multi-user email address, and 10Mb of Web space. Tech support is available daily, from 9am to 11pm. Abel was the first UK ISP to produce a 32-bit dialler software, which sets up Dial-Up Networking in Win 95/98 automatically, and is putting together a dialler and browser package for Linux users.

As well as providing modem, ISDN (64k and 128k) and leased line connections, Abel also offers 0345 connectivity (Local Call rate) for Internet and non-Internet data transfer use. Abel is one of the few providers that supplies free Amiga software. Abel Internet is an Authorised Sun Reseller, and can provide advice for your LAN, WAN, Internet or intranet needs. The software on the CD entitles you to an additional month's free email and Internet access. This will be added to the payment option you choose. Once you've installed the software, call 0131 445 5555 for your username and password.

Service Provider:	Abel Internet
Free time:	One month upon joining
Modem speeds:	Up to 56kbps (x2, K56Flex, V.90)
Technical support:	0131 445 5555
Sales enquiries:	0131 445 5555
Web site:	http://www.abel.net.uk
Monthly rate:	£11.16
Quarterly rate:	£29.96
Annual rate:	£105.75
Platform:	Win 3.x, 95, 98, Macintosh (call for Amiga)

THE X-STREAM NETWORK

100% free Internet access! For ever!

THE X-STREAM NETWORK has been around a few months now, and amazingly it offers completely free Internet access. Let's just clarify that – nothing to pay whatsoever.

X-Stream offers unlimited Net access 24 hours a day, speeds of up to 56kbps (K56Flex), and even the software is free of charge. X-Stream doesn't offer its own email servers, but when you sign up you'll also get a free account with Yahoo! Mail.

When you use the service, you'll also have a small advertising banner that stays on your screen. It's the advertising revenue generated from this that pays for the service.

Even better news is that X-Stream has just announced local call rates nationwide, so there really is nothing to lose.

All you need is a 486 or Pentium IBM-compatible PC running Windows 95, a modem, phone line and a copy of Microsoft Internet Explorer 3.02 or 4.0 on your computer. You can use other browsers as well, but you will need to have a version of Explorer installed.

Just install the software from the CD and follow the onscreen instructions to register your account. Now you'll never have to pay for Internet access ever again.

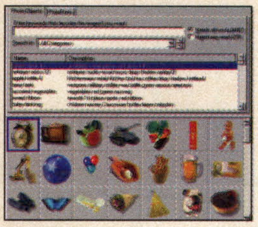
Service Provider:	The X-Stream Network
Free time:	Life!
Modem speeds:	Up to 56k (K56Flex)
Technical support:	0870 730 0134
Sales enquiries:	0870 730 6466
Web site:	http://www.x-stream.com/
Monthly rate:	Free
Annual rate:	Free
Platform:	Win 95, 98

Wait! There's more!

As well as the software that has been detailed over the last few pages, you'll find a section called 'Other Goodies.' Here's what's in it...

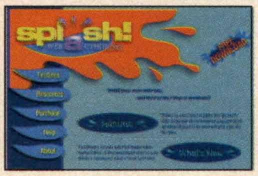
PHOTOOBJECTS LITE

What's a home page without pictures? PhotoObjects Lite gives you over 100 high-quality images and 'photo fonts' that add life and colour to your Web page or DTP – and these are totally free. An easy interface makes exporting the images a breeze, and you can easily edit the PhotoObjects using an image editor such as Paint Shop Pro (which is shareware, and available from **http://www.jasc.com**).



SPLASH!

Another one for home page enthusiasts, Splash! is ideal for beginners. featuring an intuitive WYSIWYG interface with simple drag-and-drop functionality. Experimenting with page layout is quick and easy as you don't have to write any code. There is even a Java Applet Wizard, which will ask a few questions and do all the hard work for you. There are tutorials online at **http://www.gosplash.com**.

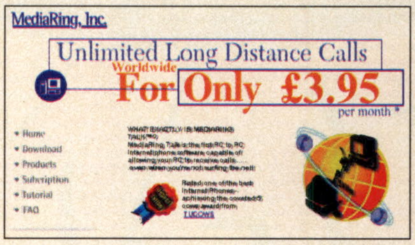


NET.MEDIC

Why take your service provider's word for it when you can find out for yourself? This demo version of Net.Medic gives you the power to see where you're losing speed on the Net, where the hold-ups are occurring and whether they're your fault, the fault of your service provider, or occurring elsewhere on the Net. Armed with this information, you can take steps to improve your connection speed. Note that this software doesn't work with Windows 98.

MEDIARING TALK

MediaRing Talk is a Net phone with a difference – you don't have to be online to know that someone is trying to call you. Once you get a call, you then choose whether to connect to the Net to take that call. When you've hung up, you're automatically disconnected. Smart stuff, especially in the UK where we pay per minute for Net phone time. This is a free month's use and after that, it'll cost you £3.95 per month. There's a full tutorial in *Practical Internet* issue 19 (Call **01202 200200** to request a copy), or online at **http://www.mediaring.co.uk.**



MediaRing, Inc.

Unlimited Long Distance Calls Worldwide For Only £3.95 per month *

- Home
- Download
- Products
- Subcription
- Tutorial
- FAQ

WHAT EXACTLY IS MEDIARING TALK?™?
MediaRing Talk is the first PC to PC Internet phone software capable of allowing your PC to receive calls..... even when you're not surfing the net!

Rated one of the best Internet Phones achieving the coveted 5 cows award from TUCOWS

NETSCAPE COMMUNICATOR 4.6

A pretty large download if you went to get it for yourself from the Netscape home page. Communicator comes with a browser (Navigator 4), newsreading and email capabilities, and Netcaster, allowing you to receive 'push' channels via the Net. If you've got enough hard drive space, it's worth installing both Communicator and Explorer as some Web sites look better in one rather than the other.

INTERNET EXPLORER 4

Microsoft
e
Internet Explorer

Although many service providers supply IE 4 as their default software on their installation discs, here it is for anyone who hasn't yet got around to upgrading. Just remember to uninstall previous versions of Explorer before installing IE 4. This is done via the Add/Remove Programs function in the Windows 95 Control Panel.

EUDORA LIGHT

For a simple, functional and easy-to-use email program, you can't beat Eudora Light, the little brother of Eudora Pro. It offers address books, filters and separate mailboxes, and all are simple to set up and use. In fact it is so good, we can't see why most people would bother upgrading to the full, paid-for version.

K56flex

Pipemedia OnLine
"Simply Straightforward Internet Access"

Full World Wide Web. e-mail, News and IRC Access

Free Easy to Setup and Use Software

No Setup, OnLine or Extra Charges

No Minimum Subscriber Time

24 Hour Technical Support

56K and ISDN Modem Access

Free Windows and Macintosh Software

Up to 20 POP3 e-mail accounts + 10 meg of Web Space

£100 per Year* or £10 per Month*

100% UK Coverage at Local Call Rates

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ISP of the Month February internet
Internet Magazine ISP of the Month for February 98

Tel: 01455 82 82 18
sales@pipemedia.net
*(*Prices Exclude VAT)* E.&O.E.

CANDID CAMERAS

Webcams have transformed the Net into the ideal habitat for voyeurs and peeping Toms. **STEVE PATIENT** *shows how you can expose yourself online*

You know how it is when you're wandering along a darkened street and you suddenly catch a flash of movement in a lighted window. You have to look. You can't help yourself. It's hardwired into your brain. Some of us don't even feel guilty as long as we keep moving – slowing down is OK, but not stopping and staring. These are subtle but important limits on acceptable behaviour.

It's this overwhelming urge to see what other people are up to that makes Webcams so compulsive. Even the truly dull Webcams have regular viewers. It's the voyeur in all of us. But before we get down to the nitty-gritty of examining a few of the many thousands of Webcams on the Net, and showing you how it all works, we need a definition of what they are.

At its purest, a Webcam shows you a live video view of a remote scene on a Web page, a view from just about anywhere on Earth, and surprisingly, even of it. It can be inside or outside. The actual 'liveness' of the image can vary from a continuous moving video image – technically called streaming video – to single video grabs which can be updated at any interval.

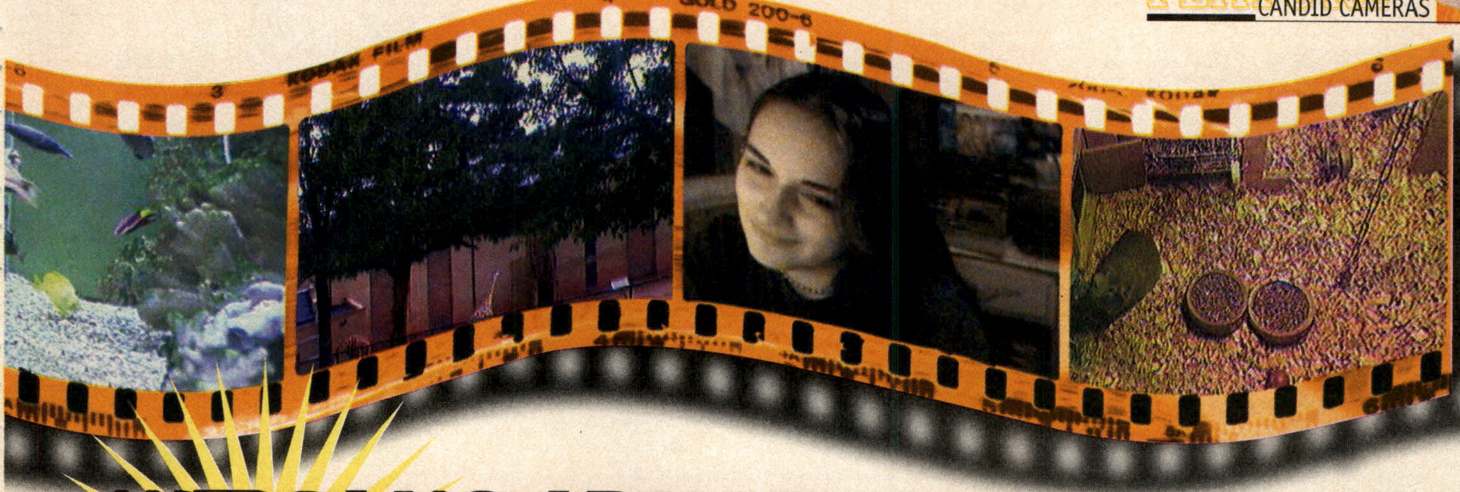
In practice, streaming video requires more bandwidth to view than most of us have available, so the majority of Webcams update with single images. Commonly, you'd expect updates from about 30 second intervals to around five minutes.

Extremely slow updates make sense when you're looking at something happening slowly, such as bureaucrats working or paint drying. But it has to be said that even updates of fast changing scenes delivered every minute or so have a strange fascination.

However, not everything that looks like a Webcam is a Webcam within our original definition. This is because many Webcams are maintained by folk with dial-up connections – most of us in fact.

If you're a dial-up Net user you can only maintain live updates while you're connected – the rest of the time, the last image loaded is the one that everyone will see until you log on again. And anyway, a Webcam showing a room in which nothing much happens (because you may be out at work or asleep) is dull, so some people show 'Webcam' images. Instead of the streaming images found on proper, continually updated Webcams, these are more akin to a slideshow.

This method is a good way of adding Webcam-style interest to your site without being permanently online. Just take some good video footage (or a sequence of stills), grab a set of frames from it, and present it as a Webcam. You can change it as often as you like and people visiting it are guaranteed to see something more exciting than 10 hours of a lonely sofa.



WEBCAMS AROUND THE WORLD

The most popular Webcams are, predictably, those featuring the bedrooms or bedsits of young women. Of these, the most famous – or infamous depending on your point of view – is JenniCAM (**http://jennicam.org**). This is simply a live view of Jenni's bedsit.

It became so popular it's now gone subscription only. It definitely says something interesting about us as people: we'd pay money to watch someone leading their – fairly ordinary – life.

JenniCAM spawned a host of similar sites, some serious attempts to make money such as the Bravo girl (**http://www.bravo.co.uk**) and a lot of parodies. However, the Webcam phenomenon didn't start in America. It started, as so many weird lifestyle ideas do, in Japan.

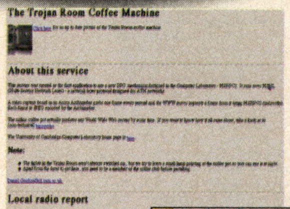
Over there, you can tune into Kimiko on KimiTV (**http://www.kimiko-dreams.com**), a young lady who, for a price, will share her penchant for mild bondage and titillation. As with JenniCAM and many others, you'll find archives of some of the 'best' images displayed. These are collected – and often sent in – by besotted viewers. In fact, Webcam archives are often useful Web resources.

But Webcams do actually have practical uses. One of the first was set up at Cambridge University in the UK and was aimed at a coffee pot (**http://www.cl.cam.ac.uk/coffee/coffee.html**). Instead of walking all the way along the corridor and risking finding the coffee pot empty, the academic staff could check first via the Web.

Lots of current Webcams perform similarly useful functions, albeit for more people. For example, many are aimed at road junctions, bridges and other traffic bottlenecks. Turn on, tune in and check out the traffic before you start. Some of them are controllable – point them where you like using on-screen controls.

Similarly, a lot of resorts and tourist attractions maintain Webcams so you can check out the weather (try Great south Bay at **http://www.lipreferred.com/bayview/**), the surf (**http://www.camerasurf.com.br/**), or

➳



The Trojan Room Coffee Machine

About this service

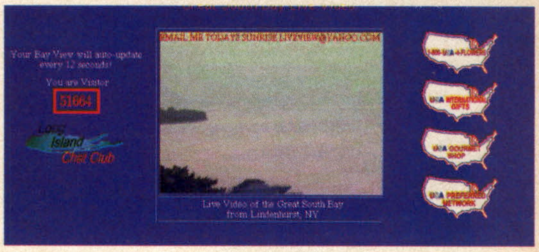
Note:

Local radio report

Fancy a caffeine rush but don't know if the pot is full? Well here's the solution

CameraSurf

Surf's up, especially if Brazil is your holiday destination



EMAIL ME TODAYS SUNRISE LIVEVIEW@YAHOO.COM

Your Bay View will auto-update every 12 seconds!

You are Visitor

51664

Live Video of the Great South Bay from Lindenhurst, NY

Check the weather at your holiday destination – looks a bit glum from here, but it is 6.00am

SOME SAUCY SEX SITES

EH, no they aren't. Strangely, few people can manage sex on a 24-hour basis. Most so called 'live' video feeds and sex Webcams are actually straight from video – usually the videos are on sale at the site as well.

Many of them aren't even that good. Instead, you end up downloading various streaming video technologies, such as VDOLive or RealAudio's offering, and then get a perfectly standard jerky, postage stamp sized video feed with dropped frames et al.

Alternatively, some sites use Java applets which then download endless frames in order to show you a 'video' loop. These are the most irritating of all as you not only have to wait ages for all the data to download but you can't even save it – like most Java it disappears when you stop viewing it.

If you're interested in watching professionals perform (when will sex become an Olympic sport, one wonders?) the most expensive and least satisfying way to do it is via the various Sexcams.

Just send off the for the original video – it's better and cheaper – so we've heard.

But if you are interested in these saucy Webcams, here's a selection:

http://www.babetv.co.uk – British, live and 100 per cent female owned... apparently

http://www.coycam.com – This site claims to be free, but there is a members only section

http://www.keyholecams.com/tiffany/main.html – the business nature of this site is obvious from the start

http://www.girlsroom.nu – This originally appeared as an amateur Webcam, but it soon turned into a fee-paying porn site. Oh well...

10:31PM
MAR 24 1998
3/22/98 11:17:07 GMT - say hi
WebCamToo Snapshot

A LOVELY LASS

THE most famous Webcam of them all has to be the JenniCAM. The lovely 22-year old Jenni has been sharing her life with the wired world for over two years now. Her site – http://www.jennicam.org – is one of the most popular on the Net and a whole host of tribute and archive sites have sprung up to meet the demand for images of Jenni. Here are a few we prepared earlier.

whatever before you go. In the long term, these sort of Webcams could turn out to be the most useful of all.

Then there are truly pointless Webcams which presumably have been set up as technology demonstrations. Endless views of the offices of various ISPs fail to impress, although Webcams showing fish tanks are oddly popular. There's even one called Feetcam (**http://www.dcs.qmw.ac.uk/~nickbk/ webcamera/**) showing someone's feet under a desk. Why, oh why make it even worse by wearing sandals?

Perhaps the most impressive examples of Webcams are those run by NASA (catch a collection of them at **http://www.geocities.com/SiliconValley/1080/nasacams.html**). When missions are flying, you can enjoy the view from the shuttle showing the Earth from space. Even if you miss the shots from the missions, many of the ground based NASA Webcams are interesting.

Mission Display Channel 3:
Mission Display Channel 4:
Mission Display Channel 5:
Mission Display Channel 6:
Mission Display Channel 7:
Mission Display Channel 8:

Check out the latest goings on in the space race from the NASA site, at http://www.geocities.com/SiliconValley/1080/nasacams.html

We aren't going to discuss any more Webcams here. You can check them out for yourself. The Web has nearly as many collections of Webcam links as it has Webcams and we've included some starting points below.

Now we're going to get stuck into ways and means to create your own Webcam, or at least a reasonable facsimile thereof. Have fun, and email *Practical Internet* with the URL of your efforts. We'll print a page of the best in a month or so.

OK, LET'S DO IT...

In early 1996, the Northern Kentucky WebCam, which appeared to overlook Devou Park, above Cincinnati, was created by driving a mile down the road, taking a Polaroid, returning, scanning it into a PC and uploading the image to the Web. Not quite live, and these days you can easily do better.

The basic requirements for a Webcam are a videocam attached to your computer and an Internet account with Web space. If you have these, the rest is just detail. Our rig uses the Videologic Captivator/PCI camera and capture card combination on a PC, though the Pace USB camera, a Connectix parallel port camera or one of many others will do perfectly well. The hardware shouldn't cost more than around £100 tops – but go for a capture card based solution if possible, as it gives a lot more flexibility.

Right, there are several steps that you have to sort out before your Webcam will work. These are:

1. Set up your camera
2. Get it working reliably
3. Capture an image from it in a suitable format
4. Upload the image to your Web site
5. Display it on a Web page

We're going to take these one at a time. The first one is outside the scope of this article. Just follow the instructions that came with your camera to install the hardware and suitable drivers.

An extremely useful diagnostic tool when setting up a video camera on a PC is Microsoft's video utility, Vidcap32. It's widely available on the Web, though oddly, not from Microsoft itself. This enables you to easily alter video settings, take grabs, capture sequences and so on. We picked it up from the CU-SeeMe site, which is at **http://www.wpine.com/Products/CU-SeeMe**.

desktop conferencing & collaboration
home
White Pine
Quick Links
company newsroom calendar contact search
how to buy
get software
get help
solutions
products
customers
partners
product info
CU-SeeMe
buy now

Let's assume you've set up the camera and it works. The next step is to figure a way to automatically grab images from it at timed intervals. Some cameras, such as those from Connectix, now come with software to do exactly this. Such software makes life a little simpler for those setting up a Webcam, but we'll use generic solutions capable of working with any PC camera that uses Video for Windows (which is most of them, though Microsoft don't tell you it's now built into Windows). There are a number of programs specifically aimed at those setting up

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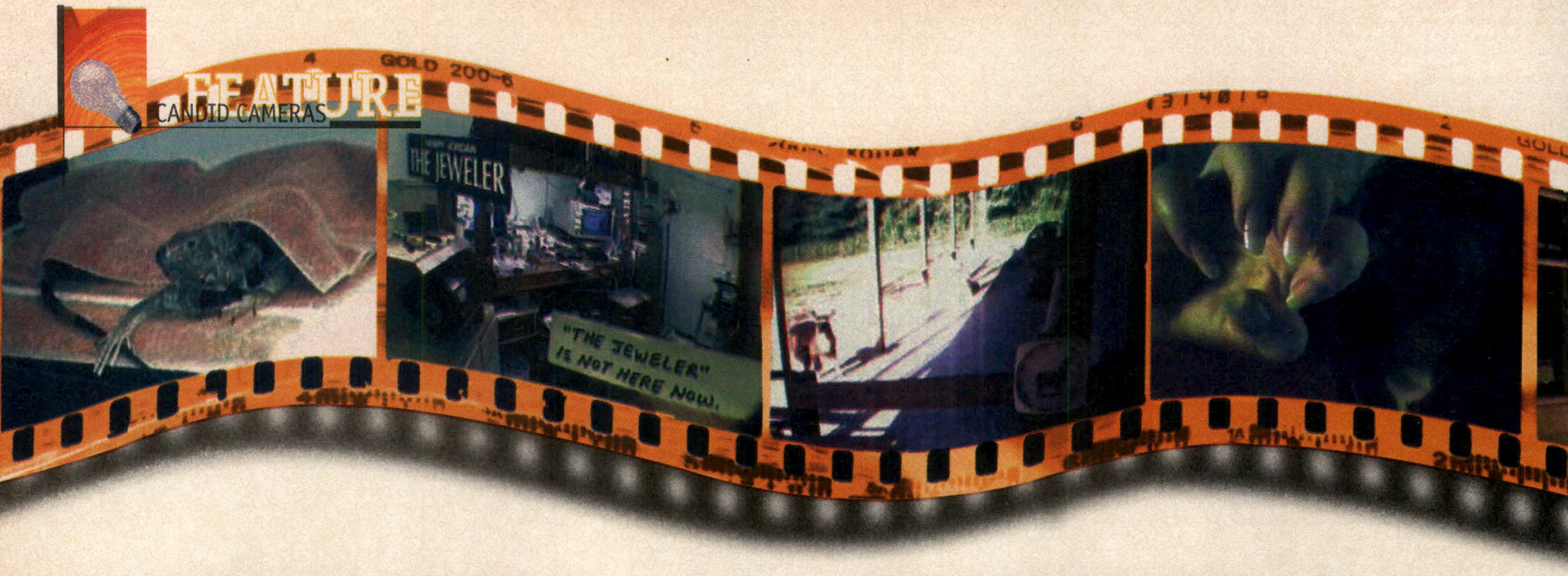
24 hour, 365 days a year technical support | 30 day money back guarantee
breathe search, one of the U.K.'s largest search engines | 10 Mbs of free web space
breathe mail – e-mail from any web enabled computer anywhere in the world | Local call access nationwide

all this plus unlimited access for just £9.99 a month.

Win a £2,000 laptop. Visit our website for details.

breathe on line 0800 298 3030 quoting ref: PI11/98
www.breathe.co.uk


THE JEWELER
"THE JEWELER" IS NOT HERE NOW.
GOLD 200-6
KODAK

ANDOVER net
ALL TECHNOLOGY, ALL THE TIME
All This, Everyday!
e-mail@address
SUBSCRIBE!
What's New on FREECODE
ENTER KEYWORDS
Search!
The new NEC no-compromise Versa @ SX notebook 1.3" thin 4.8 lbs. light
MEDIA BUILDER
Software Library
Video Editors
Previous Product
Next Product
Webcam32 4.8.1
Shareware ($25.00)
Webcam32
Home
Online Tools
Animated Banner Maker
ButtonMaker
FontMapper
GIFOptimizer
Free Image Files
Animated GIF of the Day
Animated GIF Library
Background Library
Border Library
Icon Library
Line Library
Free Font Files
Font of the Day
Font Library
NETWORK LINKS
ANDOVER net
SITES
DAILY FEATURES
ONLINE TOOLS
SPONSOR INFO
DOMAIN NAME QUERY
Ask Reggie!
FREE NEWSLETTER
Subscribe!

Interested in sponsorship opportunities on Andover Net? Click here for our online Mediakit.

Webcam32 is an application which allows video camera images to be displayed within a web page. Features of Webcam32:

➳ Webcams. The best of them for the PC, and the one we'll use here, is Webcam32. You can get this from **http://www.mediabuilder.com/2697.html**.

Webcam32 both grabs the image directly from your camera software driver, and uploads it using FTP. It can also cope with HTTP uploads and passive FTP for firewalls. It can be set to only work at times of your choosing, take grabs at any interval you like, keep local copies, recycle images in loops when nothing's happening (only really useful for those with permanent Net connections) and has all sorts of other great features for Webcam work.

The really great feature for Dial-Up Networking users is its ability to dial your ISP automatically at pre-set intervals, and upload grabs to your Webcam page. Note that even though the image changes, the filename for it should always be the same. The new image simply replaces the old image. This is the crucial part for most dial-up Webcam users.

If you want a slightly different approach you can use a separate frame grabber, such as the one supplied by Connectix, and an FTP client with a scheduling function.

One of the best is FTP Outbox, though you can even use the command line FTP client included with Windows 95, and a simple DOS-based timer or the System Agent scheduler, supplied with the Plus! pack. However, the more software you involve, the less reliable your Webcam system tends to be.

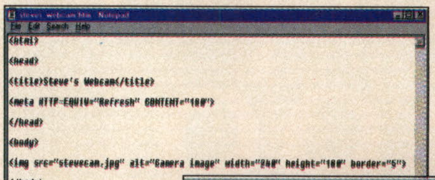
You've got your camera set up, you can grab frames at timed intervals and upload them to your Web space. Now we have to set up a suitable Web page. We're going to look at four different methods here. Two for live Webcams and two for slideshow-style Webcams (which you can use for other purposes as well).

We've also put them on the Web – see the Webcam software box. Feel free to check out the working solutions.

You can save the Web pages locally or view the source and save that – yes, we're encouraging you to use our simplified solutions as the basis for your own Webcams. Right, let's move right along here.

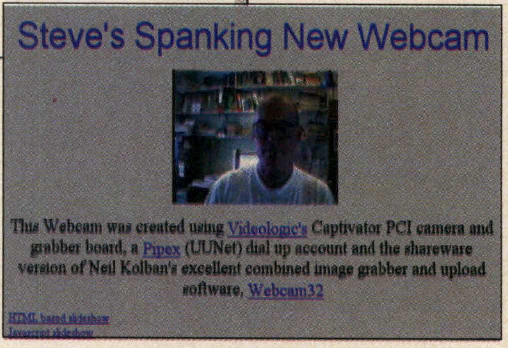
YOUR BASIC WEBCAM PAGE

We're going to have to talk about HTML and other techie stuff now. There are really only two HTML tags you need to know to set up a Webcam. The first is the SRC tag to include an image in the page, and the other is the META tag used to force a browser to reload the page at fixed intervals.


steves webcam.htm - Notepad
File Edit Search Help

```
<html>
<head>
<title>Steve's Webcam</title>
<meta HTTP-EQUIV="Refresh" CONTENT="180">
</head>
<body>
<img src="stevecam.jpg" alt="Camera image" width="240" height="180" border="5">
</body>
</html>
```

This is the absolute minimum HTML required to create a Webcam page. This will work – just supply suitable images



Steve's Spanking New Webcam

This Webcam was created using Videologic's Captivator PCI camera and grabber board, a Pipex (UUNet) dial up account and the shareware version of Neil Kolban's excellent combined image grabber and upload software, Webcam32

HTML based slideshow
Javascript slideshow

Here's our test Webcam in action, though we don't promise it will see much action once this article is finished

First the SRC tag. When you upload the image to your Web site it's best to put it into a directory you use only for Webcam material. Here we'll assume the Web page and the images you're uploading from your video camera are in the same directory.

In the screen grab you can see we've defined an ALT for the image (so people know what should be there if they have images turned off) as well as height and width parameters that match the image. This reduces the amount of flickering when the page reloads.

The <META HTTP-EQUIV="Refresh" CONTENT="180"> line tells the browser to reload the page automatically every three minutes (180 seconds). Just change the number of seconds to alter the refresh rate, but remember it can't be less than the time needed to download the image or it will never be displayed correctly.

Which brings us to another point: image size. In this example we've used a picture size of 240 by 180 pixels throughout. This is captured at 16-bit colour depth (more than adequate) and compressed using JPG to about 10K. This makes the shortest practical refresh interval – assuming 1K per second downloads – about 15 seconds. In practice, 30 seconds is more realistic.

Feel free to use the HTML on the test Webcam pages as a working template for your own projects.

When starting your Webcam projects, never feel you need to re-invent the wheel. You could get away with changing nothing but the filename of your uploaded image.

WEBCAMS AND WEB BROWSERS

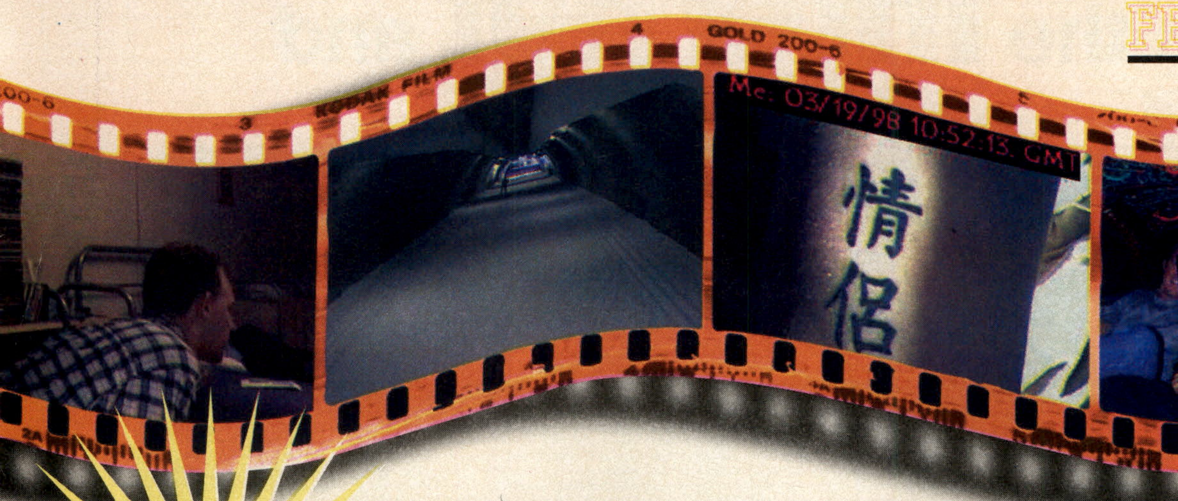
SOMETIMES, OK, frequently, you'll access a Webcam and find a static picture. Perhaps the one you saw yesterday. There are several reasons why this can happen.

The most common reason is a browser set to never update the pages it has in its local cache. However, even if your browser is set to update only once per session, the picture may not change until you hit the browser's 'Refresh' button, which makes it go off for a new copy.

If you're using a proxy Web server for faster page loads, you may not get Webcam updates – it depends on how it's been set up. If this is the case, change to your ISP's standard Web server.

Of course, like mine, many Webcams don't change because the connection is dial-up; it only works while the owner is connected. The rest of the time it will show the last picture that was loaded.

The other well known problem is the fragility of Windows 95 with video feeds. It will crash occasionally. For a dramatically more reliable Webcam you should base the camera on a Windows NT system.



A JAVA APPLET WEBCAM

The only drawback with the meta refresh tag approach to a Webcam is the need to reload the whole page each time. This isn't a problem with a page as simple as our test site, but if you had one with lots of images, sounds and so on embedded in it, the reloads will be extremely distracting. Java provides a solution.

A Java applet can be used to restrict the reload to the Webcam image itself – leaving the rest of the page in place. This is a far more elegant solution, and one we've implemented on the test site for you.

There are many free Java applets on the Net you can use, but the one we chose comes from the Webcam32 site.

The disadvantage of Java for most of us is the extra difficulties involved, not least that it won't work on browsers that don't support Java or have Java applets disabled to increase speed and security. Never mind, it looks cool so we'll do it anyway.

Everything is basically the same as for the original Webcam page except the Java applet is used to update the page instead of the Refresh Meta tag. You still have to upload new images – with the same name – at regular intervals from your camera.

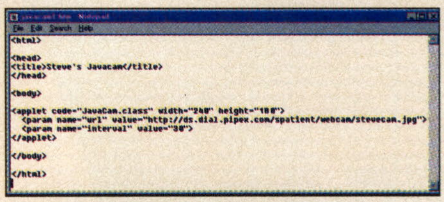
All the instructions for using the applet are described on the Java download page, but we've taken the trouble to put it into a simple Webcam for you anyway, 'cos we're kind folk. The two important things to remember are firstly to upload the Java class file called JavaCam.class to your Webcam directory, and then to put the code to run it in the HTML part of the page

This always starts and finishes with an <APPLET> </APPLET> tag pair. In between go the <PARAMETER> tags which tell the applet what to do. On this one you can change the image width and height, the URL of the image and the refresh interval (in seconds).

Note that the applet itself must be on the same server as the Web page that's referencing it, or it won't work. That's Java security for you. The image, though, can be anywhere you like, but you must provide an absolute reference to it – a full URL – even if it's in the same directory.

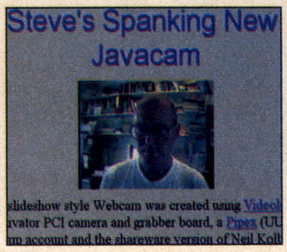
There are a variety of suitable Java applets out there, many with a great deal more functionality than this one, but remember; the Java applet itself has to be downloaded before the Webcam works at all, so the smaller the applet the better for your viewers. This one is just 4K, not bad.

➵



```
<html>

<head>
<title>Steve's Javacam</title>
</head>

<body>

<applet code="JavaCam.class" width="240" height="180">
  <param name="url" value="http://ds.dial.pipex.com/spatient/webcam/stevecam.jpg">
  <param name="interval" value="30">
</applet>

</body>

</html>
```

This is the absolute minimum of code required to implement a Java based Webcam – not so hard really


Steve's Spanking New Javacam

slideshow style Webcam was created using Videol
ıvator PCI camera and grabber board, a Pipex (UL
ıp account and the shareware version of Neil Kolb

The Java applet version of our test Webcam looks the same as the basic HTML version, but works a little more smoothly

Huh?!

FTP
File Transfer Protocol. The method which is usually used for transferring files across the Internet. There are separate FTP programs available, although much of it is now done over the Web.

HTML
HyperText Markup Language. The universal language of the Web in which all pages are written. Official versions of HTML are defined by the W3 Consortium, which is at http://www.w3.org.

USING WEBCAM32

WEBCAM32 is shareware with a $25 price tag. The shareware version will only run for an hour at a time after which you have to restart it, but this is no problem when setting up a trial Webcam.

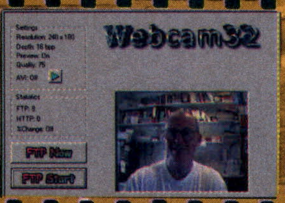
In effect, Webcam32 and similar programs combine image grabbing and FTP upload with all the timing controls you need to make the job simple. On the downside, the kind of people who can write these things tend to assume it's all self evident, so the help, while sophisticated (a downloadable compiled Web site in effect) isn't aimed at complete beginners. Nevertheless, download it.

To begin with, download the program (http://www.mediabuilder.com/2697.html) and install the software and help file. Now you need to configure Webcam32. From the 'Settings' menu select 'FTP' and enter your FTP server name and the directory where your files go. You also need your user ID (not an alias) and your password so Webcam32 can make automatic connections.

You don't use Webcam32 to upload all the rest of your files, only images. So you need a standard FTP client as well. We used FTP Voyager which enables drag and drop file uploading and downloading. You must also enter the name of the file to upload into Webcam32 – remember, each new image grab has the same name as the existing one. Webcam32 adds the JPG file type itself.

The 'Dial-Up' setting is the only other one you really need to worry about to begin with. Webcam32 needs to know how you connect to the Net. Specifically, AOL users need to do things a little differently (don't they always?).

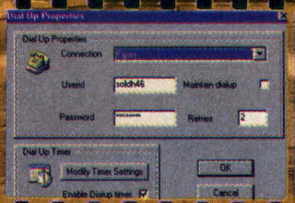
Webcam32 has an enormous number of settings. A wise person accepts the defaults and doesn't change things for the sake of it – especially when they don't know what the setting does.



Settings
Resolution: 240 x 180
Depth: 16 bpp
Preview: On
Quality: 75
AVI: Off

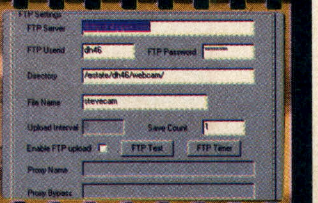
Statistics
FTP: 0
HTTP: 0
%Change: Off

The Webcam32 interface is simple and clean. You don't need to display the video view in order to grab it



Connection:
Userid: soldh46
Password:
Maintain dialup ☐
Retries: 2
Enable Dialup timer ☑

The 'Dial-Up' settings from the 'Setup' menu should have details about the dial-up connection you want to use with it



FTP Server:
FTP Userid: dh46
FTP Password:
Directory: /estate/dh46/webcam/
File Name: stevecam
Upload Interval:
Save Count: 1
Enable FTP upload ☐
Proxy Name:
Proxy Bypass:

The most important setting is 'FTP.' Most of the information Webcam32 needs to work is entered here

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- ✓ Award-winning service from Global Internet
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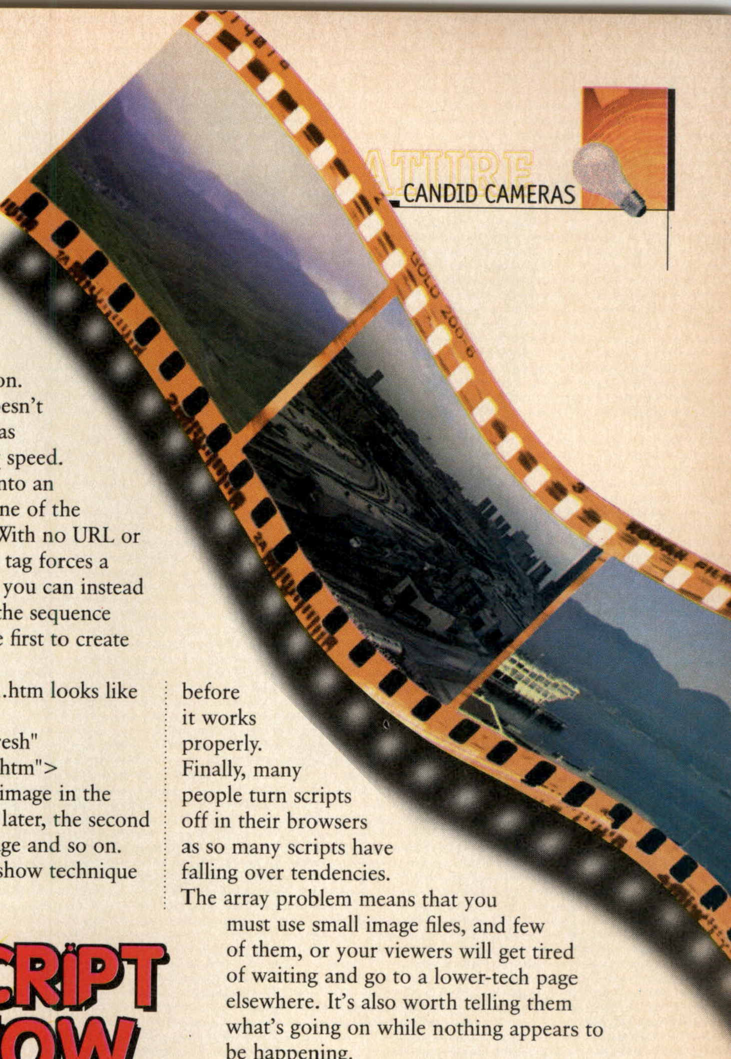
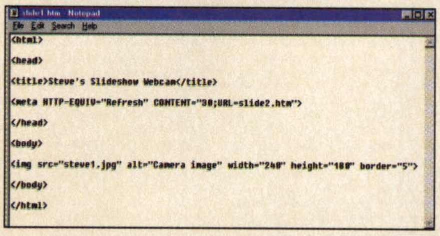
Registered charity no. 258003



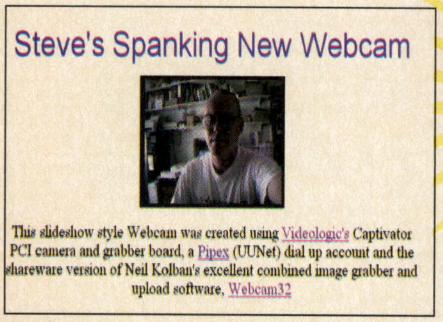
HTML SLIDESHOW WEBCAM

A dial-up Webcam can be dull out of hours, and anyway, it might be impractical to point a camera at the scene in question: an exploding volcano, whales cavorting and so on. In these cases, you can make a slideshow from a set of still images or video grabs. Obviously, these should be indexed – have the same name and their number in the sequence.



```
<html>
<head>
<title>Steve's Slideshow Webcam</title>
<meta HTTP-EQUIV="Refresh" CONTENT="30;URL=slide2.htm">
</head>
<body>
<img src="steve1.jpg" alt="Camera image" width="240" height="180" border="5">
</body>
</html>
```

This is the basic code you need to implement a slideshow style Webcam, just make as many Web pages as you have images to show



Steve's Spanking New Webcam

This slideshow style Webcam was created using Videologic's Captivator PCI camera and grabber board, a Pipex (UUNet) dial up account and the shareware version of Neil Kolban's excellent combined image grabber and upload software, Webcam32

One advantage of a slideshow style Webcam is it runs just as well on your own computer – which might give you some more ideas

To do this you create a series of identical pages, each containing one of the images in question. Let's assume you've called them page1.htm, page2.htm and so on. The actual number of pages doesn't matter, but keep each as small as possible to improve the display speed.

To turn this series of pages into an automatic slideshow, you use one of the parameters of the refresh tag. With no URL or Web page specified, the refresh tag forces a reload of the current page, but you can instead tell it to load the next page in the sequence with the last page reloading the first to create an endless loop.

The refresh tag on the page1.htm looks like this:

<meta HTTP-EQUIV="Refresh" CONTENT="30;URL=page2.htm">

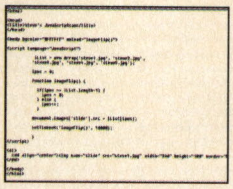
The first page loads the first image in the sequence and then, 30 seconds later, the second page loads with the second image and so on. This is remarkably simple slideshow technique to implement.

JAVASCRIPT SLIDESHOW WEBCAM

A slideshow based on a JavaScript has definite advantages and disadvantages which you have to take into account before you employ it. Let's look at the disadvantages first.

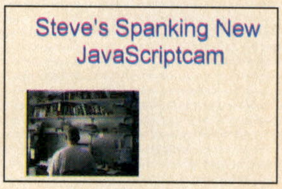
JavaScript is a real programming language and not a lot of people know it. Also, slideshow implementations rely on building a local array of images, which means the whole lot have to be downloaded to your computer before it works properly. Finally, many people turn scripts off in their browsers as so many scripts have falling over tendencies. The array problem means that you must use small image files, and few of them, or your viewers will get tired of waiting and go to a lower-tech page elsewhere. It's also worth telling them what's going on while nothing appears to be happening.

So what about the advantages? There are two. The first is a certain, flicker-free elegance once the images have downloaded – everything is then running on your local machine and it can run a hell of a lot faster there. The second is the ability to boast about your mastery of Web technology.



This is the basic minimum required to implement a JavaScript-based slideshow. Use your own filenames in the array and definition list

The first image in a sequence showing a chap swivelling on his swivel chair – ah, the hard life of the self-employed



Steve's Spanking New JavaScriptcam

There are many public domain and freeware JavaScripts on the Net to run slideshows, though most of them are so complex you'll spend weeks trying to understand and adapt them. We used a simple automatic JavaScript – from one of the many JavaScript collections – to highlight the process. All we had to do was change the names of the image files in the array and to put the first image name in the definition list at the end. You can also edit the height and width tags to match your images as well as changing the image change timing (currently 10,000 milliseconds).

A final word of warning. JavaScript is like a magical spell, which means if you get it the slightest bit wrong it won't work. Unlike a magic spell, though, demons won't eat your head – though after a few hours of struggle with it, you might find that an easier option.

WEBCAM SOFTWARE, SITES AND RESOURCES

MAC SOFTWARE
Sitecam
http://www.rearden.com

LINUX SOFTWARE
Livecam
http://www.nikos.com/livecam

JAVA WEBCAM APPLET
http://www.kolban.com/webcam32help/java.htm

FTP OUTBOX
http://home1.pacific.net.sg/~mannfai/

VIDCAP32
http://cu-seeme.cornell.edu/~WCW/download.htm

DIRECTORY OF WEBCAM MACHINES
http://www.geocities.com/~anderberg/ant/machines/

TIGHT BUDGET WEBCAM
http://www.internet-95.com/company/starship/how.htm

PRACTICAL INTERNET WEB PAGES (FREE TO COPY)
http://ds.dial.pipex.com/spatient/webcam/steves_webcam.htm

JAVASCRIPT SOURCE
http://www.ba.infn.it/~zito/jstable.html

ISPY
http://www.ispay.nl

VARIOUS WEBCAMS
http://www.brownout.com/webcams/othercams.html

WINDOWS 95/NT SOFTWARE
Webcam32
http://www.kolban.com/webcam32

HACKERS
Hacking/Warez
12345672266289008931236364
2600

HaCkInG OvEr ThE

All World

Hackers – psychotic criminals bent on destroying the Net, or free-thinking individualists with a mission to master its mechanics? **STEVE PATIENT** *goes code crunching*

Finding out that legendary hacking crews such as L0pht Heavy Industries and Cult of the Dead Cow are now heavily into network consultancy and commercial security software, is as disturbing as first discovering politicians lie for a living.

It makes sense, though: the best of anything is always a valuable commodity in business, and business is nothing if not pragmatic. When it's only your enemies who know what you need to defend yourself, it make sense to hire them. This bizarre logic is how many hackers have come to be highly paid members of 'tiger teams,' who, with permission, attempt to breach their client company's security.

But let's step back in time. The word, and hacking itself, originated – along with so much computer stuff – at MIT, the Massachusetts Institute of Technology, in the late sixties and early seventies. Then, it had positive connotations. Hacking was defined as 'an appropriate application of ingenuity' and hackers were respected.

WHAT IS HACKING?

With this definition, hacking doesn't have to apply just to computers, and many classic hacks have little to do with them, other than the fact that those responsible tend to be in computer research departments. Hacking is a state of mind.

For the true hacker it isn't enough to be able to understand and control a system, style is equally important. Those early hackers would use the faults they wanted fixed in order to demonstrate both the problem and their understanding of the system – and they'd do it in fine prankish style.

Cult of the Dead Cow doing its stuff live at DEF CON 6, August 1998

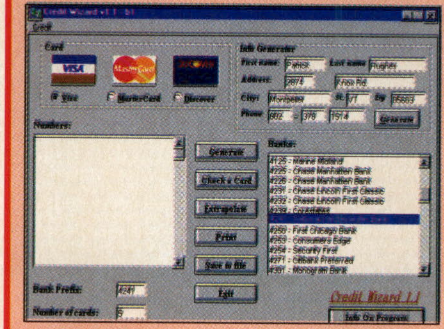
Itz illegal

A number of hacking activities are, regardless of their difficulty or elegance, illegal. For example, there are programs that will generate credit card numbers to get you into pay sites. Until that number fails to produce a payment, you'll be able to access the site. There are lots of credit card number and personal detail generators out there, mostly with a US bias, but then, on the Net no one knows you're an Albanian. But using a fake card number (or it might turn out to be someone else's) is fraud, and when you're caught, you'll find that you're promptly thrown in jail.

At a somewhat higher level of hackerdom, accessing any part of a computer to which you don't have explicit permission is illegal. So what? Well, the ultimate aim of most hackers is to reach 'root,' from where all things are possible. On badly set-up Unix systems it's often possible to use Telnet to get in, invoke a utility with a suitable privilege level and deliberately crash it. If you're lucky, such a crash can leave you with root access. Telnetting in was OK, even crashing a utility, it might be argued, was an accident, but using your new root access is definitely classed as illegal.

Similarly, Telnetting into a mail server and using it to forge email is doubly illegal, regardless of whether or not the mail server administrator did or didn't set up safeguards.

On the other hand, truly elite hackers get off just on knowing they could have done something. They take pride in disguising their intrusion. They will then (anonymously, naturally) email the system administrator, tell him or her that they've breached security, how they did it and how to stop anyone else doing it – now that's style.



First name: Patrick
Last name: Hughes
Address: 2874 Knox Rd
City: Montpelier
St: VT
Zip: 05663
Phone: 802 - 378 - 1514

4125 - Marine Midland
4225 - Chase Manhattan Bank
4226 - Chase Manhattan Bank
4231 - Chase Lincoln First Classic
4232 - Chase Lincoln First Classic
4239 - Corestates
4250 - First Chicago Bank
4253 - Consumers Edge
4254 - Security First
4271 - Citibank Preferred
4301 - Monogram Bank

Bank Prefix: 4241
Number of cards: 5

Credit card number generators are a popular way into pay sites, but don't work on all of them and you'll WILL go to jail if you're caught

On the other hand, much of what the media calls hacks are nothing of the kind. For example, the recent theft of information from thousands of AOL members wasn't a hack. It exploited a human weakness to gain information for personal gain (it was an insider job), and showed no style at all. Theft is rarely stylish.

Conversely, the original Word macro virus, Concept – the one that did nothing except announce itself – was a hack. It almost certainly started in either Microsoft itself or a client company, and came after repeated warnings from a variety of internal and external sources. They pointed out the security weaknesses involved in having autostart macros attached to documents written in a macro language capable of making system calls.

And let's be honest about this – the macro virus made you aware of the risks without any actual damage – it highlighted the potential.

Cult of the Dead Cow at DEF CON 5, July 1997: "We rocked the house."

HACKING ETHICS

Generally, hackers aren't dangerous criminals; which is to say they aren't trying to steal from you, damage your goods or sell your children. They see what they do as harmless fun.

This is why so many stopped associating with Agent Steal (aka Justin Tanner Petersen), when they found out he was plundering the phone system for personal profit, turning other hackers in to the FBI to keep out of jail, persuading the gullible to help him steal from phone companies and generally acting like a bad egg.

On the other hand, when Phiber Optik (aka Mark Abene) – an extremely high profile US hacker with a finely developed set of ethics – was finally sent to jail on 7 January 1994 for a year and a day, few thought it a sensible response. One CIA agent even offered to supervise him if the judge relented – but money talks, and Phiber had upset the powerful phone companies.

In practice, many of those who understand computers and networks are guilty of the odd bit of hacking, and it can come as a bit of a surprise to them when they find they're doing something illegal. The only difference between them and a hacker is that the hacker has made his interest into a lifestyle.

And if it seems odd to spend years

WALK THE WALK AND TALK THE TALK

SO you want to at least appear to be a hacker. Tricky, as it doesn't rest on physical appearance. Let's profile them.

Sterotypically, hackers tend to be young, male, intelligent, introverted, sexually inept, socially challenged control freaks with little interest in the usual social rewards of money and power. Some may be female, but otherwise they're the same.

They're usually disinterested in watching sport, have little interest in their physical health or a regular lifestyle, are either underfed or overfed – with the former predominating – and are uninterested in fashion. They tend to dress for comfort and in clothes they won't have to change too often. Their sense of style is reserved for their real interest of hacking.

None of this is to say they're so very different from the rest of us, just further toward one end of a standard curve. It does, though, tend to explain why so many of them have trouble holding down the kind of jobs their high skill level would normally attract.

You can't motivate them with more money, you can lose them instantly over trivial issues such as being on time and they're extremely difficult to manage – putting their own interests way above company requirements.

Hackers talk with precision and, due to their vast, in-depth knowledge of matters digital and logical, are easily confused by such things as double negative questions, which most English people answer – by convention – as if there's only one negative.

2600
THE HACKER QUARTERLY
2600 THE HACKER QUARTERLY
3 years, 5 months, 19 days, 11 hours, 9 minutes, 3 seconds
2600 PRODUCTIONS
we're filming CLICK HERE!
FREE KEVIN
2600 Magazine

The most famous hacker magazine, 2600, is also available online, and even hacker crews have their own Web sites these days

They tend to be pedantic about meanings because in their work there is no ambiguity. They will also play puckish games with language, for example, in correcting you by email one might say, 'You've spelled that wrnog.' [sic]

Hackers are capable of ignoring you – or rubbishing your opinion – without knowing they're rude. They have confidence in the self-evidence of their own rightness. They're also capable of massive commitment, working to the exclusion of eating and sleeping if something is interesting. For them, interest and obsession aren't far apart.

Hackers like to sound 'kewl' and tend to form 'secret societies' with melodramatic or weird names: Legion of Doom, Chaos Crew, Cult of The Dead Cow, Masters of Deception, 2600 and so on.

Hackers do not look or speak like Keanu Reaves in *Johnny Mnemonic* – this is the kind of mistake lusers make (lusers is a typical hackish word, precisely combining the concepts of loser and end user).

L0pht Heavy Industries at work

➽ mastering a network system just to break in and put a triumphant message on a screen you shouldn't be able to reach, well, is it really all that different from trying to grow the largest leek?

GROUP SECTS

Just as the only fraudsters you get to hear about are those who get caught, so the only 'hackers' that make the papers are those who make mistakes, cause damage or aren't good enough to conceal their identity. Hackers who cultivate a public persona, such as the legendary Captain Crunch, usually have public issues they're seeking to promote. These might concern legal, privacy, standards, social or other issues.

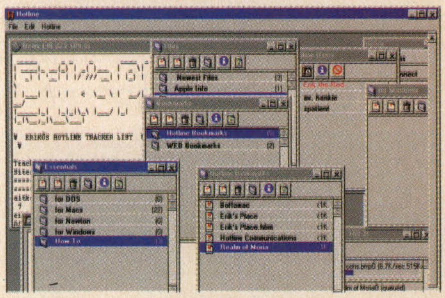
Hackers as a group are heavily into encryption and anonymity, which tend to go together. They communicate by anonymous remailer using encrypted messages so even their own ISP has no knowledge of their secret identity. The best hackers insist on running their own anonymous remailers – see the box 'Remailerz keep secretz.' However, as with every human activity, hacking can be carried out on a variety of levels.

WEBZ OF DECEIT

Check the Net and you'll find lots of public sites devoted to 'hackz,' 'serialz' and 'warez.' These are, respectively, known weaknesses in the security of various computer systems; serial numbers for stolen software (by definition, if you use one of these to 'register' a shareware or software product you're a thief) and the software itself (warez) and patches for it (bits of code that alter the way it works). These sites will often include game cheats and passwords for sex sites.

None of this is particularly clever, more a matter of magpie acquisition. But the next step up is sites with the kind of utilities real hackers use; software designed to automate the more complex or tedious parts of the hackers' trade. Hackers, a fast moving, technically savvy group, like novelty, so many of these sites are now only accessible via software such as Hotline, but it's at this level it gets interesting.

Imagine this scenario. You know someone who logs into a company network from home. Clearly, he or she has the information necessary to win the trust of the network guardians. This person isn't going to tell you the passwords (and anyway, you don't want them to know you're interested) but if you

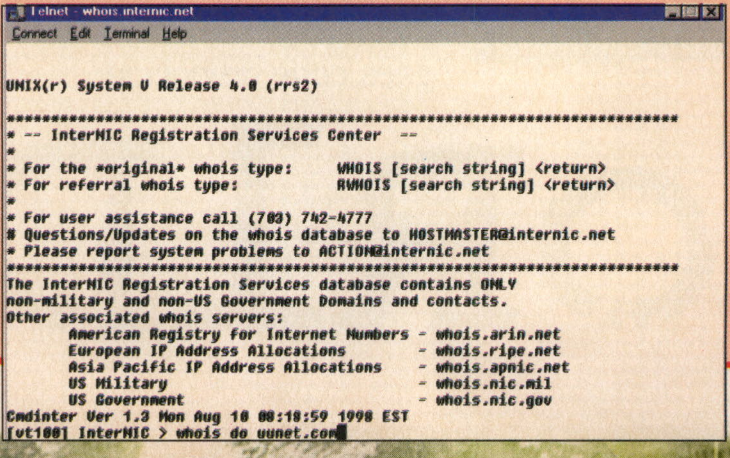


Along with BBS systems some warez folk are turning to conferencing software, and Hotline is the latest and greatest. Get it today

Hacking from your PC

RIGHT, you've learned enough Unix to at least get a directory listing or find out who's currently logged in. Now all you need is to find a suitable machine to try to access.

Your first step on the Net is to visit one of the Whois servers to get yourself some machine numbers. Whois can tell you a lot more than the IP address of a Net machine and who owns the domain name – it can give you many of the other machines within a specific domain – but



```
UNIX(r) System V Release 4.0 (rrs2)

*****************************************************************************
* -- InterNIC Registration Services Center  --
*
* For the *original* whois type:      WHOIS [search string] <return>
* For referral whois type:            RWHOIS [search string] <return>
*
* For user assistance call (703) 742-4777
# Questions/Updates on the whois database to HOSTMASTER@internic.net
* Please report system problems to ACTION@internic.net
*****************************************************************************
The InterNIC Registration Services database contains ONLY
non-military and non-US Government Domains and contacts.
Other associated whois servers:
       American Registry for Internet Numbers - whois.arin.net
       European IP Address Allocations        - whois.ripe.net
       Asia Pacific IP Address Allocations    - whois.apnic.net
       US Military                            - whois.nic.mil
       US Government                          - whois.nic.gov
Cmdinter Ver 1.3 Mon Aug 10 08:18:59 1998 EST
[vt100] InterNIC > whois do uunet.com
```

Here we are Telnetting into the US Internic Whois service. This handles .com and .net domains. We're checking the uunet.com (Pipex) domain

WhErE to sTaRt?

NEWSGROUPS

alt.2600
alt.2600hz
alt.2600.crackz
alt.2600.hackerz
alt.2600.moderated
alt.2600.phreakz
alt.2600.programz
alt.2600.QnA
alt.2600.warez
alt.hacker
alt.hackers
alt.hackers.discuss
alt.hackers.groups
alt.phreaking
alt.magazine.2600hz
alt.unix.wizards
comp.hackers
comp.protocols.ppp
comp.protocols.tcp-ip
comp.protocols.tcp-ip.ibmpc
alt.comp.virus
alt.comp.virus.source.code
comp.virus

IRC CHANNELS

#exceed
#warez950
#warez-waldo
#cracking
#hackers
#cracks
#hacking
#2600
#ucf2000
#pc97
#oldwarez
#warez666
#m8leech
#phatfiles
#mp3
#mp3files

WEB LINKS

NB. Hacker Web sites come and go fast

Hackers Jargon File
http://dante.creighton.edu/jargon/jargon.html

Text of Hacker Crackdown by Bruce Stirling
http://viper.falch.no/ebooks/crackdown

Risks Digest Etc
http://www.infowar.com

List of anonymous remailers
http://www.publius.net/rlist.html

Commercial Anonymous Remailer
http://www.nymserver.com

Unix Guru Hacker
http://linuxcoe.coe.fsu.edu/~sloan/text/unixguru.txt

Mixmaster Anonymous Remailer
http://ftp://utopia.hacktic.nl/pub/replay/pub/remailer/mixmaster

Newbie Hackers
http://www.lwenlock.demon.co.uk/hacking.htm

Unix backdoors
http://www.dev.tv3.se/~andreas/UNIX_Backdoors.htm

L0pht Heavy Industries (elite hackers)
http://www.l0pht.com

Who Owns It?
http://www.internic.net/cgi-bin/whois

Hotline servers
http://www.troutmask.com/servers.shtml

have physical access to the machine it isn't difficult to install a little utility that captures every keystroke to a file.

WHO GOES THERE?

Collect this file and you have a password. Once into the system you can usually get the rest of the passwords (encrypted) and set other utilities the job of cracking the code. You're looking for unused passwords or those with privilege levels high enough to create your own persona on the system – and so it goes. This is completely illegal, of course.

Most elite hacking is concerned with penetrating computer security because beating the 'experts' is currently the best game in town. This is what separates the men from the boyz.

Many networks are still run by mainframes with operating systems such as MVS and heavy duty versions of Unix, though Windows NT is ever more common these days.

Just because a system can be secure doesn't mean it is, however. In the early nineties, 13-year-old Noah, in the US, used the completely unsecured network computers at Westinghouse to provide him access to Sprint's

➳

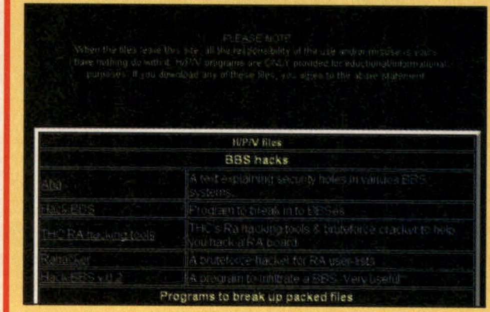
57 VARIETIES OF HACKER

HACKING includes, as hackers might say, all the kewl stuph you can do with computers, but although all hacking is interconnected, the field is so large you have to specialise.

Top of the tree are the serious Unix-style hackers, working from a vast and intimate knowledge of the premier heavy duty networking OS and its utilities – this bunch can quote the specific faulty utility program sub-routines they can use as back doors at you – in hex, for the processor of your choice.

Cracking, technically, is simply gaining access to a computer someone else thinks you can't get into. It involves password file collection, password cracking, social engineering (lying to people to gain information) and penetration (but not on a first date).

Warez people are into software – other people's software. Their thrill is taking off the price tag, and then there are the people with too many capitals in their name, who may know little about computers or networks, but know how to use the software written by the real experts. In terms of sheer size and complexity and security, the phone system is the Holy Grail for hackers. Technically called Phreaking, phone hackers can pull tricks with the phone service those of us who can't even master call forwarding can only marvel at. And these days, we have so many different kinds of phone network – and it's all digital, hurrah.



H/P/V files	
BBS hacks	
[illegible]	A text explaining security holes in various BBS systems.
[illegible]	Program to break in to BBSes
[illegible]	THC's RA hacking tools & bruteforce cracker to help you hack a RA board
[illegible]	A bruteforce hacker for RA user-lists
[illegible]	A program to infiltrate a BBS. Very useful
Programs to break up packed files	

There are many 'hacker' Web sites, but not all of them actually have software tools available. Route tracers, Telnet and so on you're expected to have anyway

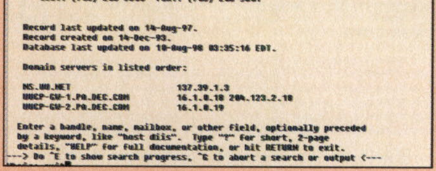
first you have to master the typical Unix style command structure. Experts prefer to access Whois by Telnet.

Telnet offers a means to run a program on a remote machine. You're actually looking at a remote console, a bit like a DOS session under Windows – a perfect hacking tool. Run Microsoft's free Telnet utility by typing Telnet at the Run command on the Start menu.

Armed with Telnet and machine IP addresses, you can now try connecting. If a machine lets you connect you can try running commands on it – assuming that you recognise the log-in and know what commands are available on the system running it.

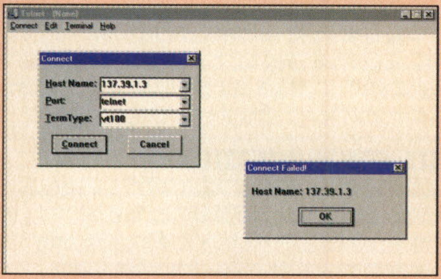
This is as far as we can take you. Most of the machines you locate this way won't let you connect or, if they do, severely limit your range of actions. Besides, you're almost certainly breaking some law or other just being on the machine.

It's at this point, if you want to use this access to gain further access to other machines, (you can Telnet from one machine to another in a long chain) that you need to know more than the person who set it up.



```
   Domain Name: UUNET.COM

   Administrative Contact, Technical Contact, Zone Contact:
      Uunet, AlterNet - Technical Support  (OA12)  help@UUNET.UU.NET
      +1 (800) 900-0241
   Billing Contact:
      Payable, Accounts  (PA10-ORG)  acctspay@UU.NET
      tel.: (703) 206-5600  fax.: (703) 206-5601


   Record last updated on 14-Aug-97.
   Record created on 14-Dec-93.
   Database last updated on 10-Aug-98 03:35:16 EDT.

   Domain servers in listed order:

   NS.UU.NET                     137.39.1.3
   UUCP-GW-1.PA.DEC.COM          16.1.0.18 204.123.2.18
   UUCP-GW-2.PA.DEC.COM          16.1.0.19

  Enter a handle, name, mailbox, or other field, optionally preceded
  by a keyword, like "host diis".  Type "?" for short, 2-page
  details, "HELP" for full documentation, or hit RETURN to exit.
---> Do ^E to show search progress, ^C to abort a search or output <---
```

Among the information we get is a list of domain server IP addresses for UUNET. Now we can try Telnetting into these



Host Name: 137.39.1.3
Port: telnet
TermType: vt100

Host Name: 137.39.1.3

And because UUNET is professional and knows what it's doing, it isn't going to let us into a domain server – hackers, like salesmen, aren't put off by rejection

Remailerz keep secretz

ONE of the single most important lifestyle decisions for a wannabe hacker is to go underground. If hackers have a tendency, it's toward paranoia, which they've raised to an art form.

You get extra brownie points for being non-existent in cyberspace, as well as for your skills. The ultimate hacker is both omnipotent and unknowable, a bit like achieving Buddhist enlightenment. The two main skills required to achieve this are a mastery of anonymous remailers and relentless encryption.

All hackers have PGP signatures (Robert Zimmerman's Pretty Good Privacy) – which they use to prove that messages haven't been tampered with by agents of a foreign or local power.

No hacker would be caught dead using anything less than 128-bit encryption. They would also sooner eat his or her own head than use an encryption system mandated by any government organisation, or one without a published technical description they can check thoroughly.

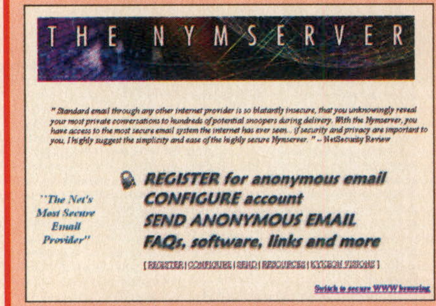
Hackers routinely encrypt messages and attachments, and worry about statistical analysis of email traffic revealing information about them. Without irony, they maintain lists of people who collect such information.

Anonymous remailers conceal the origin of an email message, but this isn't enough for most hackers because naturally, they don't trust those who run them – which is why some run their own.

When Johan Helsingius was forced by Finnish courts to divulge the identity of an anon.penet.fi user after legal action by the Scientologists, the paranoia index among hackers went off the chart.

Now we have Cypherpunk remailers which don't keep identity information at all (though spamming is killing these off fast). For the truly serious hacker, chains of remailers are protected at every step by encryption and email re-ordering using the Mixmaster system offer state-of-the-art concealment. Such systems are tricky for the non-technical to understand and non-trivial for anyone to use but hey, we're talking freedom here, which costs eternal vigilance.

Finally, hackers believe government agencies routinely put up Web sites on subjects that worry them and then track visitors to find out who's interested in what. So the latest wheeze is anonymous Web browsing with automatic cookie killing. On the Net, no one can tell who the hackers are.



THE NYMSERVER

" Standard email through any other internet provider is so blatantly insecure, that you unknowingly reveal your most private conversations to hundreds of potential snoopers during delivery. With the Nymserver, you have access to the most secure email system the internet has ever seen... if security and privacy are important to you, I highly suggest the simplicity and ease of the highly secure Nymserver. " -- NetSecurity Review

"The Net's Most Secure Email Provider"

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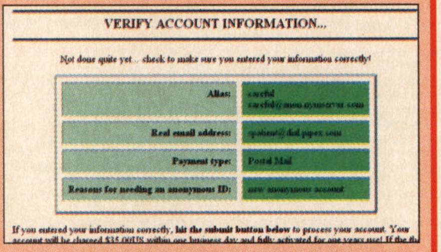
SEND ANONYMOUS EMAIL
FAQs, software, links and more

[REGISTER | CONFIGURE | SEND | RESOURCES | KYKEON VISIONS]

Switch to secure WWW browsing

The commercial anonymous emailer, Nymserver, offers total anonymity for just $35 a year



VERIFY ACCOUNT INFORMATION...

Not done quite yet... check to make sure you entered your information correctly!

Alias:	careful careful@anon.nymserver.com
Real email address:	[illegible]@dial.pipex.com
Payment type:	Postal Mail
Reasons for needing an anonymous ID:	new anonymous account

If you entered your information correctly, hit the submit button below to process your account. Your account will be charged $35.00US within one business day and fully activated for one years use! If the

And so, for a few minutes effort you can at least assume the identity of a hacker even if you can't hack the actual hacking

---

backbone network. Westinghouse makes nuclear reactors. When the company realised it had a digital intruder, it contacted the secret service. Only when they picked up messages such as, "I have to go now, my mom's calling me for dinner" did they realise they weren't dealing with international terrorists.

FIRST STEPS...

You need an in-depth knowledge of systems before you can hack them. If the following command means nothing to you, you aren't ready to start hacking:

```
chmod g+w, o+rw somefile
```

A laptop, a mobile and a couple of the L0pht Heavy Industries crew

To take the first step on the road to hackerdom, you have to learn at least enough Unix to invoke a command shell of your choice. You can then use it to locate the files you want, run the system utilities and so on.

For the true hacker, of course, the elegance of the hack is important. These people are looking for the plaudits of their peers – and style counts. Besides, like all researchers, they have to publish.

There is a vast collection of hacking documents on the Net. But you won't find the good stuff discussed in a public forum. Hackers know people are after them.

ILL COMMUNICATION

Encrypted anonymous email is OK for person-to-person contact, and there are several listservers used by hackers to discuss security weaknesses and such-like, but when it gets down to the serious stuff, public networks are out. Instead, hackers will tend to use private BBSs, (Bulletin Board Systems). A BBS means they control the system completely and don't have to worry about visits from strangers.

Where to start in the world of hacking? You could always try getting some circuitry tattoed onto yourself

From L0pht Heavy Industries' site – a hacker's birthday party, perhaps?

There are hacker forums on the Net itself, but you have to prove yourself to gain access.

Let's assume you're serious about becoming a hacker. How can you meet other hackers? A good place to start is on IRC. Become familiar with IRC, and you'll at least be able to get in on their discussions.

SPEAKING THE LANGUAGE

Hackers are thorough. If you want help with a project, research it before putting it up. To have a usable idea, you need to understand your material.

Where to start? An ability to do low level (bit crunching) style programming in C will help. You need to master scripting in Perl and maybe a few other languages used on Unix systems.

Learn about network protocols, particularly TCP/IP, well enough to learn something from a data packet. Investigate and understand the logical and physical structure of the Net, and learn to recognise and use the interfaces to servers, routers, switches and so on.

Research how networks authenticate users and other computers, collect arcane technical manuals for everything, but most importantly, learn to operate network operating systems. This still means Unix for most Net systems. Linux is a good learning tool – and an excellent personal OS for hackers as so many hacking tools run under Unix. It's free. Get it now and sneer at Win95 users.

If you do all this you'll have the basic tools you need to become a hacker, and even if you still can't cut it as a hacker you can at least take a job as a highly paid system administrator, security consultant or Unix guru.

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Chris Ellison can be emailed on chris@netfreedom.org. Internet Freedom's Web site is at: http://www.netfreedom.org

HYPERTEXT

How do you figure our whether what you read on the Net is true? In exactly the same way as you would with any other medium, says **CHRIS ELLISON**

According to some popular perceptions, there are three types of fallacies: lies, damned lies, and things you read on the Internet. The most recent catalyst for this somewhat negative portrayal of the Net was an announcement that a teenage couple in America would lose their virginity, broadcast live by Webcam. The story was widely reported in online and offline Internet publications around the world, and millions of Net users awaited eagerly for 'Mark' and 'Diane' to share this special moment in cyber-history. Only it was a hoax. It appears to have been an elaborate scam: both 'Mark' and 'Diane' were actors, neither were virgins, and neither intended to have live sex. The real intention is a matter for dispute – the actor playing Mark claimed it was to be "about safe sex and abstinence," the producer claimed it was "just a soap opera," and the Web site owners alleged that it was a "hoax dreamed up to make money."

So, as if you need telling, don't believe everything you read on the Net. But the revelation that even reputable journalists can be taken in by sophisticated hoaxes has prompted some to condemn the nature of the Internet itself. Jonathan Miller, writing in *The Guardian* last July, for instance, criticised the Net for being "a seething mass of fraud and misinformation." In a fascinating article he described the Internet as "ceaselessly pumping drivel into an ocean of sludge."

The best way to establish the truth is to allow free and open debate about it

I take exception to lies as much as anybody. Indeed, Internet Freedom was on the receiving end of a little ill-conceived untruth itself, when someone from technical support at our old UK service provider told us the reason they had to shut down our free speech site. Apparently, it was because they had been instructed to do so by the anti-terrorist squad. It turned out (only after widely distributing a press release about it, unfortunately) that the police were not involved, and the providers were merely a little over-zealous in deciding that we shouldn't remain their customers.

It seems to me, however, that underlying much of the criticism of the Net for hosting lies is a condemnation of the very thing that makes me think the Internet is wonderful. It's the fact that anyone can publish anything they want. The Net allows unprecedented potential for freedom of expression. That doesn't necessarily mean that people will always tell the truth, of course. But the best way to establish the truth is to allow free and open debate about it. After all, as a friend of mine put it, "lies are formed in the shadow of the truth."

So how do you distinguish truth from lies on the Net? How do you know what to believe and what to dismiss? Well, in the same way as in the offline world. Before I trust a critic's film review, I build up a profile of what they have said in the past. I work out whether I agree with their previous recommendations. I try to figure out what axe they might have to grind. I might also seek alternative opinions. Then I weigh up all the factors and make an informed judgement. And so it is with the truth.

It is no more difficult to tell lies on the Net than in any other medium. But the very fact that almost anyone can share their opinions and knowledge does mean that it can be easier to get at the truth.

The alternative is to allow arbitration on 'the truth' to fall into the hands of someone else. Whether it be the libel courts or the editors of the papers, I risk losing my capacity to form my own judgements. You see, there is no reason to believe that anyone is automatically more free from bias or prejudice than others. *The Guardian* is surely just as likely to be influenced by its own predilections as any other publication. And that goes for *Practical Internet*, too.

At the end of the day, I can't help wondering whether what really lies at the bottom of much criticism of the Net is a condemnation of ordinary people having their say and making up their own minds. If I'm right, then my vote goes with the sludge.

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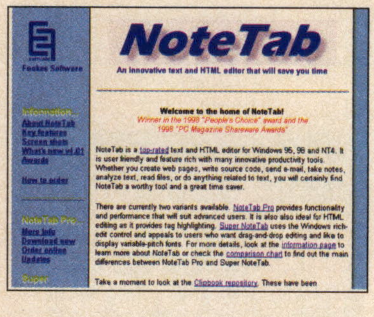
James Seabright's HOME IMPROVEMENT

Want to inject some va-va-voom into your home page? **JAMES SEABRIGHT** *is here with all the tips you need*

I have spent many a column inch debating which Web editing software is the best for the job, but an email from Ian Simpson has kindly reminded me of my spiritual home: hand-crafted HTML code. I must humbly apologise if I have ever recommended Windows Notepad for the creation and editing of serious Web pages, for I know it simply doesn't cut the mustard. In fact, it fails to even make a dent.

The purpose of Ian's email was to recommend the shareware package NoteTab, which is a worthy replacement of the very-limited Notepad program that every Windows user possesses. For your information, the idea behind NoteTab is that text editing can be made a great deal easier with a few extra features – software's answer to go-faster stripes. If you download the free trial version of NoteTab from **http://www.notetab.com/**, you will be impressed at the greater ease that HTML can be created. NoteTab includes plenty of easily-accessed libraries of HTML tags and JavaScript commands, to mention only two. There are even mathematical functions that will calculate your ideal weight, by the way! Other features include the useful ability to launch two browsers for offline testing of your home page. All very impressive stuff, and exactly the sort of program that will prevent people from being scared off the manual HTML route to home page nirvana.



NoteTab

An innovative text and HTML editor that will save you time

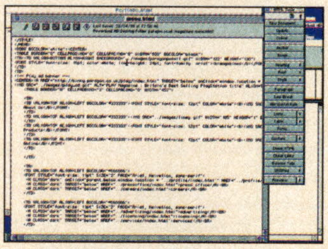
Welcome to the home of NoteTab!

Winner in the 1998 "People's Choice" award and the 1998 "PC Magazine Shareware Awards"

NoteTab is a top-rated text and HTML editor for Windows 95, 98 and NT4. It is user friendly and feature rich with many innovative productivity tools. Whether you create web pages, write source code, send e-mail, take notes, analyze text, read files, or do anything related to text, you will certainly find NoteTab a worthy tool and a great time saver.

There are currently two variants available. NoteTab Pro provides functionality and performance that will suit advanced users. It is also also ideal for HTML editing as it provides tag highlighting. Super NoteTab uses the Windows rich-edit control and appeals to users who want drag-and-drop editing and like to display variable-pitch fonts. For more details, look at the information page to learn more about NoteTab or check the comparison chart to find out the main differences between NoteTab Pro and Super NoteTab.

Take a moment to look at the Clipbook repository. These have been



BBE KING

However, NoteTab fails to collect the Home Improvement award for 'best text editor.' The undisputed champion in that league is BBEdit, a feat of software engineering so good that it is only available to Macintosh users. It is a fully commercial product, sold from **http://www.barebones.com/**. There is a Lite version that is freely downloadable, and well worth a look. BBEdit has every feature a HTML coder ever wished for. My personal favourite is the ability to automatically calculate the WIDTH and HEIGHT properties for an <IMG> tag when you give it the file name. Poetry in motion.

Other impressive features include the ability to specify whether files are saved in Macintosh, PC or Unix format – essential for cross-platform projects such as our Web site, Paragon Online (**http://www.paragon.co.uk/**). BBEdit can also be extended with plug-ins, such as the FTP add-on that will send and receive text files like a full-blown FTP client. Not quite suitable for whole-site uploads, but very useful when you are only changing the odd page or two. Macromedia Dreamweaver includes a free copy of BBEdit in its Macintosh version.

MAC WIDE WEB?

On the subject of Macintosh computers, how many readers are Mac users? So far, I have concentrated heavily on PC software and shareware products, but it is clear the Mac remains the platform of choice for design applications.

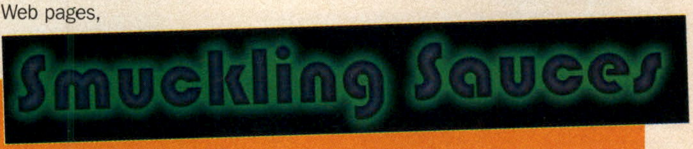
An interesting point to note on the issue of cross-platform compatibility of Web pages, is the difference in point sizes between Web browsers on PC and Mac platforms. You should realise that many a Web page that looks wonderful on the Mac, will appear dire and poorly designed on the PC. Generally speaking, PC fonts are one size up the scale – a size three font on a Mac looks more like a size four font on the PC. Thankfully, salvation is at hand in the form of Cascading Style Sheets. Remember that I mentioned them in last issue's Question Time? Well, I am coming around to the idea of stylesheets very quickly. For example, this problem of cross-platform confusion can be solved by simply adding a stylesheet that specifies the exact pixel height in which text should be displayed, thereby preventing any design embarrassments.

Look out for the next tutorial, which will be on the subject of elementary stylesheets.

Top tip!

Improve the position of your home page in search engines by going to http://www.metabuilder.com.

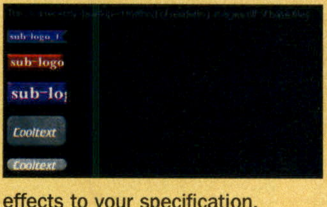
TOOL OF THE MONTH

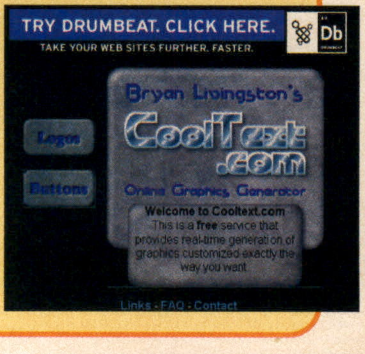


COOLTEXT

http://www.cooltext.com

Get your stylish headlines and bevelled buttons from this exciting new site, which offers dozens of possible font and appearance options to make your headlines glisten and sparkle. They may even win you the site of the month award! Log on and try out this site, which will create text with special effects to your specification, including control on font, size and colour. Email me at the usual address with any URLs you have created with this top tool.





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Welcome to Cooltext.com

This is a **free** service that provides real-time generation of graphics customized exactly the way you want.

HTML HINTS

You've been framed

In the last HTML tutorial, I explained the basics of setting up a framed Web page. As promised, this tutorial returns to this topic by explaining how to link individual frames.

HYPERLINK HEADACHE

The first thing to remember is what frames do to your page. Each frame behaves separately from all others, unless you tell it otherwise. A link to another Web site will load into the frame that contains the link; annoying if you are linking to a different site. To avoid this, cancel out your frameset – it's much easier than it sounds!

A typical link looks like this: <A HREF="http://www.paragon.co.uk">Paragon Online</A>

A link that cancels out all frames on loading needs only one additional ingredient: <A HREF="http://www.paragon.co.uk" TARGET="_top">Paragon Online</A>

In fact, the TARGET property of this tag is very powerful. Notice that it gives the link's TARGET as _top. The underscore before the word 'top' is important: it shows that a generic word is coming up – rather than the name of another frame. This is because a frame's NAME can be specified in the TARGET property, causing the link to actually load into another of the frames in the currently defined frameset.

Confused? Well, to clear things up, let us return to the example from the last tutorial, this time printed with the correct quotation;

```
<HTML>
<FRAMESET COLS="200,*">
    <FRAME SRC="left.htm" NAME="left" SCROLLING="AUTO" NORESIZE FRAMEBORDER="0">
    <FRAME SRC="right.htm" NAME="right" SCROLLING="AUTO" NORESIZE FRAMEBORDER="0">
</FRAMESET>
</HTML>
```

This HTML code creates a page vertically divided into two frames, the first of 200 pixels width and the second taking up the remaining width. Note the names of the frames are, rather logically, 'left' and 'right.' If you want to use 'left' as a navigational system for your Web site, it will presumably contain quite a few links to other pages which you want to appear in 'right.' To make sure this happens, your links must all include the TARGET property set to 'right' – something like this: <A HREF="http://www.paragon.co.uk" TARGET="right">Paragon Online</A>.

FIRST <BASE>

You could make life a lot easier by simply including one extra tag in your HTML page. In the example above, where you have a navigation bar that contains only links that should appear in the other frame, you can save adding TARGET="right" to every single link. Simply put this tag in the <HEAD> of your HTML file: <BASE TARGET="right">. This will mean that every single link on the page will appear in the right-hand frame, unless otherwise specified. For example, if you want a link to load into the navigation frame, then just add TARGET="left" or even TARGET="_self" to the relevant HTML tag.

Top tip!

Be careful how you write dates on your Web page: 01/08 means January 8th to an American Net user.

D'OH!

THE last tutorial in Home Improvement, which appeared two issues ago, had a couple of glaring errors! All of the HTML code in the tutorial was printed with only single quotes, when of course double quotes should have been used throughout. Just to clarify: one quote bad, two quotes good. Sorry for this error!

SIMPLE SCRIPTING

Paul Speller's site (see below) reminded me of a regularly occurring problem with navigational framesets. It has a custom navigation page for each section of his site. Although this is an imperfect way of creating a frameset, it's easy to see why it's used. In HTML alone, you can't get a single mouse click to load a different page into each frame, unless you load in an entirely new frameset. The problem with this is that the user sees the current frameset disappear and then redrawn, before the correct pages are finally loaded. Thankfully, a minor twist of JavaScript can solve this problem very easily.

You don't have to understand JavaScript to use this example, simply copy the code and don't think about it. JavaScript can cause insomnia if you give it too much thought – believe me on this one.

```
<A HREF="navigation2.html" TARGET="_self" onClick=
"parent.right.window.location = 'main2.html' ">Switch to part 2</A>
```

And yes, those really are single quotes around 'main2.html' – everything else is double quotes. You should change the 'parent.right.window.location' according to the name of your main frame – in this case it is 'right'. Note also that the <A HREF> actually points to the new navigation bar, rather than the new content page. This is because some browsers would literally forget to load both pages if you do it the other way around. You shouldn't have a <BASE TARGET> tag in the navigation bar HTML for this example. Of course, if you want to change both frames on a page within the main page frame, the code changes. Simply substitute TARGET="_self" for TARGET="left" or whatever the frame name of your navigation bar is.

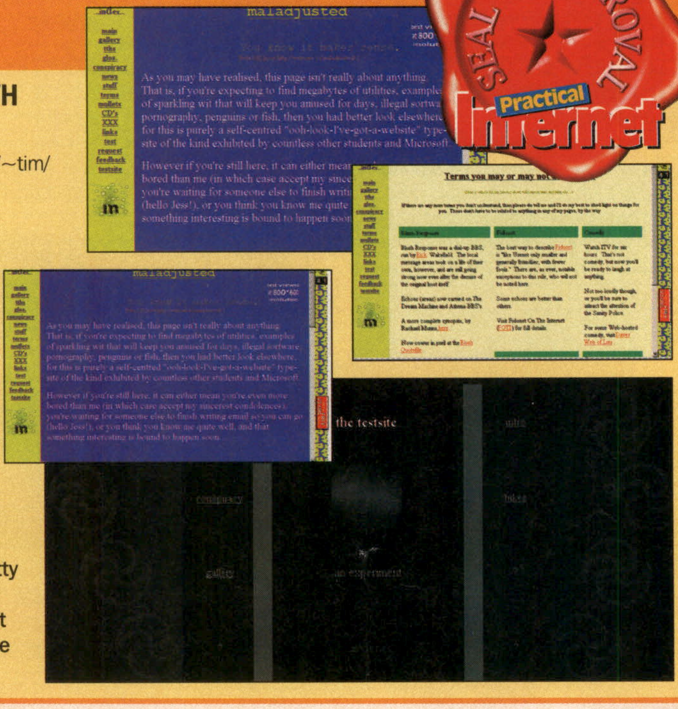
READERS' SITES

HOME PAGE OF THE MONTH

Title: Maladjusted
URL: http://sucs.swan.ac.uk/~tim/
Design: Tim Hawkins
Rating: ★ ★ ★ ★ ⯪

A delight of a site. The navigation frame is a lovely idea, and not too big either. The site is full of bizarrely interesting features, with only occasional design slips such as the odd bright colour. However, overall the design looks great, and with the 'test sites' currently on display, it is clear that Tim has got plenty more ideas up his sleeve.

Plenty of really interesting links and cool graphics, together with witty bios of Tim's circle of friends. Plus some very funky animated GIFs. But for a few rough edges, this would be a five out of five site!



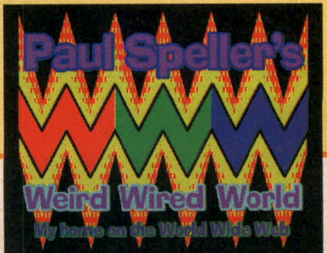
As you may have realised, this page isn't really about anything. That is, if you're expecting to find megabytes of utilities, examples of sparkling wit that will keep you amused for days, illegal software, pornography, penguins or fish, then you had better look elsewhere, for this is purely a self-centred "ooh-look-I've-got-a-website" type-site of the kind exhibited by countless other students and Microsoft.

However if you're still here, it can either mean you're even more bored than me (in which case accept my sincerest condolences), you're waiting for someone else to finish writing email so you can go (hello Jess!), or you think you know me quite well, and that something interesting is bound to happen soon.

SECOND PLACE

Title: Paul Speller's Weird Wired World
URL: http://www.geocities.com/CollegePark/Union/8323/
Design: Paul Speller
Rating: ★ ★ ★ ☆ ☆

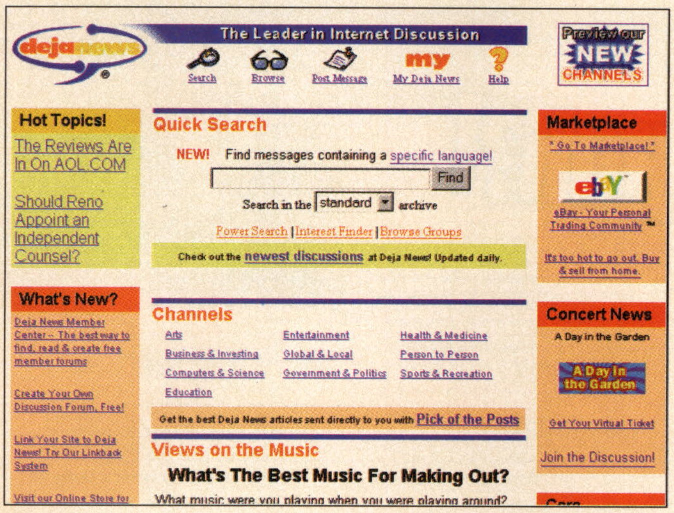
UPPERS: Oodles of consistently designed content, easy navigation
DOWNERS: Forced resizing of graphics, inefficient use of frames (read this issue's tutorial, Paul!)
VERDICT: On the right track, especially with the Teletubbies quiz (I'm Po, apparently).



SITE SELECTION

Making use of Usenet

The Leader in Internet Discussion
Browse
Post Message
my
My Deja News



Hot Topics!
The Reviews Are In On AOL.COM
Should Reno Appoint an Independent Counsel?

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NEW! Find messages containing a specific language!
Find
Search in the standard archive
Power Search | Interest Finder | Browse Groups
Check out the newest discussions at Deja News! Updated daily.

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" Go To Marketplace! "
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Views on the Music
What's The Best Music For Making Out?
What music were you playing when you were playing around?

Concert News
A Day in the Garden
A Day In the Garden
Get Your Virtual Ticket
Join the Discussion!

As a change from the normal smorgasbord of Web sites, this issue's homepaging hotlist centres on top newsgroups for furthering your HTML pleasure. Whatever your home page needs; help, advice, visitors, or maybe even some new ideas – you'll probably find some assistance by connecting to the right newsgroups. Just as a quick reminder for those readers who thought that 'Web' and 'Internet' mean the same thing: newsgroups, also known as Usenet, form a kind of electronic bulletin board categorised into group names. Anybody can send a message to these groups, through the newsreading software included with most Web browsers. However, the easiest way to link up is via one of the various Web sites that archive all the newsgroups – such as DejaNews at http://www.dejanews.com/.

PRODUCT-SPECIFIC NEWSGROUPS

Some of the more popular Web page authoring packages have actually got their own newgroups, allowing loyal users to get the best out of their software by comparing notes with other fans of the package in question. Occasionally, a representative of the manufacturer itself might lend a hand and answer questions posted to the group. Macromedia's popular Dreamweaver tool has a group at **macromedia.dreamweaver**, and Microsoft's all-conquering FrontPage beast can be found at **microsoft.public.frontpage.client**.

INFOSYSTEMS UNITED

These newsgroups are the original location for online discussion of all things related to the Web. There may be many cheap imitations, but they cannot rival the **comp.infosystems.www** hierarchy in terms of sheer expertise and popularity. HTML – warts and all – is the topic of discussion in **comp.infosystems.www.authoring.html**, whereas **comp.infosystems.www.authoring.misc** is a more general group for discussion of Web page creation. Those especially interested in design should refer to **comp.infosystems.www.authoring.site-design**, and Web-related software tools come under the spotlight in **comp.infosystems.www.authoring.tools**. If you are feeling especially technical, then you might get a kick out of the esoteric chat in **comp.infosystems.www.authoring.stylesheets**. However, these groups might prove too advanced if you aren't an especially experienced Internet user.

Top tip!

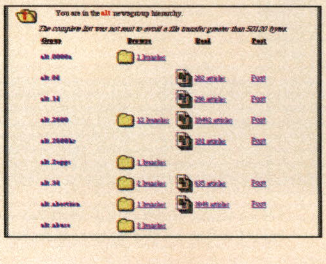
Don't waste time uploading your entire site after you've made changes. Just send the files you've modified.

ALT DOT EVERYTHING

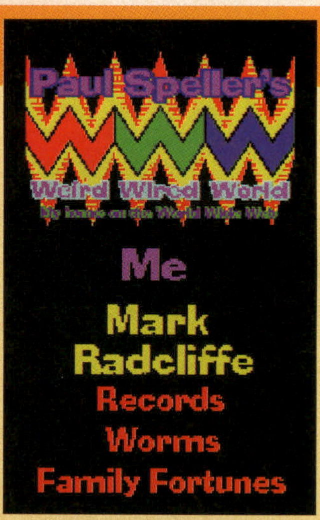
Anarchic is the best way to describe newsgroups beginning with 'alt.' Over the years, it has developed a life of its own, spawning groups that really ought to exist in other sections of the Usenet tree. First and foremost comes **alt.html**, which probably gets used a lot because it is much quicker to type than **comp.infosystems.www.authoring.html**. The two groups perform pretty much the same function, although **alt.html** typically contains more irrelevant and unreliable information. Web editors are well covered, with **alt.html.editors.enhanced-html** as a great resource for the 'bells-and-whistles' approach to Web design. Support for editing software comes under the groups **alt.html.editors.webedit** and **alt.html.webedit**. The manual approach to HTML coding is the focus of **alt.html.writer's discussions**. Whatever your interest, these groups are bound to cover it.

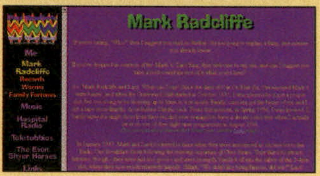
CLOSER TO HOME

For some reason, our great nation has a 'design tips' newsgroup all of its own. Quite why this is tucked away in the alt hierarchy of Usenet is another mystery waiting to be unravelled. In any case, **alt.homepages.designtips.uk** is an interesting place to find or suggest new ideas for home page design. You might also want to investigate whether your ISP has created a newsgroup just for its users' queries on Web design. This is obviously the first place to go should you have trouble getting your pages onto Web space provided by your ISP. Find out if your ISP boasts one by launching some newsreading software (like Microsoft's Mail and News or the newsreader included with Netscape's Communicator). Look through the group listing for your ISP's name. All Demon Internet groups begin with 'demon,' for example. If in doubt, speak to your ISP helpline. ➳


You are in the alt newsgroup hierarchy.

The complete list was not sent to avoid a file transfer greater than 50120 bytes.

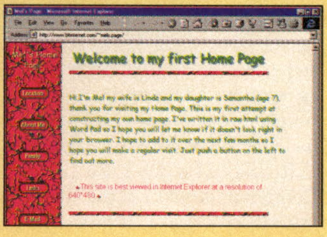




THIRD PLACE

Title: Mel's Page
URL: http://www.btinternet.com/~mels.page/
Design: Mel
Rating: ★ ★ ☆ ☆ ☆

UPPERS: Hand-chiselled HTML, well organised, consistent design
DOWNERS: Garish colour scheme, text too large compared to button size.
VERDICT: An excellent first effort, which will be even better with some expansion.


Mel's Page - Microsoft Internet Explorer
File Edit View Go Favorites Help
Address http://www.btinternet.com/~mels.page/
Mel's Home Page
Location
About Me
Family
Links
E-Mail

Welcome to my first Home Page

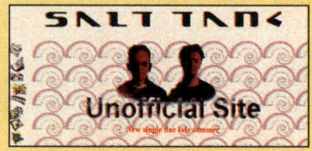
Hi I'm Mel my wife is Linda and my daughter is Samantha (age 7), thank you for visiting my Home Page. This is my first attempt at constructing my own home page. I've written it in raw html using Word Pad so I hope you will let me know if it doesn't look right in your browser. I hope to add to it over the next few months so I hope you will make a regular visit. Just push a button on the left to find out more.

This site is best viewed in Internet Explorer at a resolution of 640*480

FOURTH PLACE

Title: Salt Tank, Unofficial Page
URL: http://surf.to/salttank/
Design: Chris Davies
Rating: ★ ☆ ☆ ☆ ☆

UPPERS: Erm, fairly comprehensive, I guess.
DOWNERS: Graphics large and ugly, background clashes with text, poor DHTML only works with Netscape.
VERDICT: This breaks almost every design rule I have ever talked about! Back to the drawing board?



QUESTION TIME

Send your questions about HTML to the usual address, and I will do my best to answer them on this page. Unfortunately, I cannot answer individual queries by email

Q I created my home page using Netscape Composer, but when I added some ad banner code manually through Microsoft Word, this caused a problem. Composer refuses to save the page every time I try to alter it with the ad banner code included. How can this be avoided? Also, how can I add shareware and freeware files to my site for download?

Aaron Bonnici

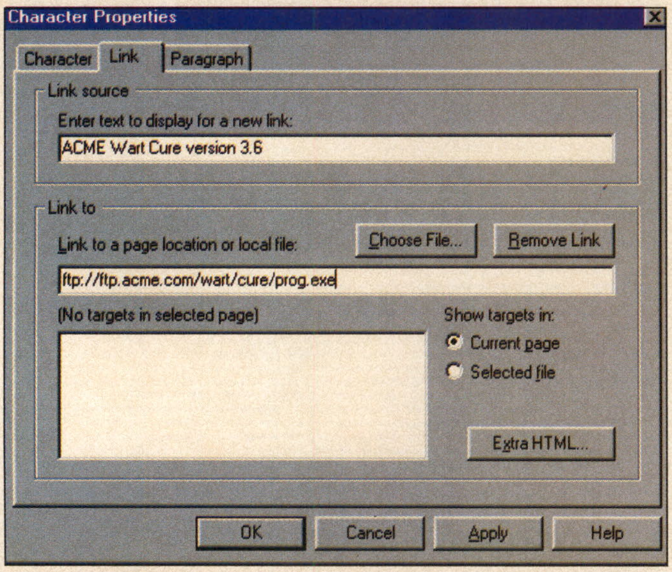
A There could be various solutions to this problem. For a start, I would avoid editing HTML with Microsoft Word, because it tries to convert the HTML document into its own formatting and then save it back again, often with undesirable results. Secondly, Composer may have been upset by some possibly unorthodox code used by GeoCities. In any case, it is entirely possible for Composer to handle unrecognised HTML tags – it is more likely that the use of Word has caused the problem. Try taking your original page and adding in the banner ad code with Windows Notepad, which will maintain the file format throughout.

Top tip!

Don't get too personal on your Web site. Avoid including your home address and phone number on it.

As for your second question, here are a few warnings. First: check that it is OK with the author or distributor of the software for you to redistribute their product. Also ensure that you are providing the original installation program for the software, not just an archived version of what is on your hard drive. This way, you will avoid transferring viruses, and you will also make sure that the program will work properly when downloaded by other people.

Composer can quite easily insert a link to the relevant download. Simply click the 'Link' button on the button bar in Character Properties, and then enter the descriptive text under 'Enter text to display for a new link.' Then type the URL under 'Link to a page location or file.' If you are providing the file via an FTP server, simply type in the server name, followed by the path to the file. For example, to create a link to the file download.zip in the directory /sw/free/ on the server ftp.acme.com, you would enter ftp://ftp.acme.com/sw/free/download.zip.



Link source

Enter text to display for a new link: ACME Wart Cure version 3.6

Link to

Link to a page location or local file: ftp://ftp.acme.com/wart/cure/prog.exe

(No targets in selected page)

Show targets in: ● Current page ○ Selected file

When using Netscape Composer to create your home page, you can easily insert a link to the relevant download

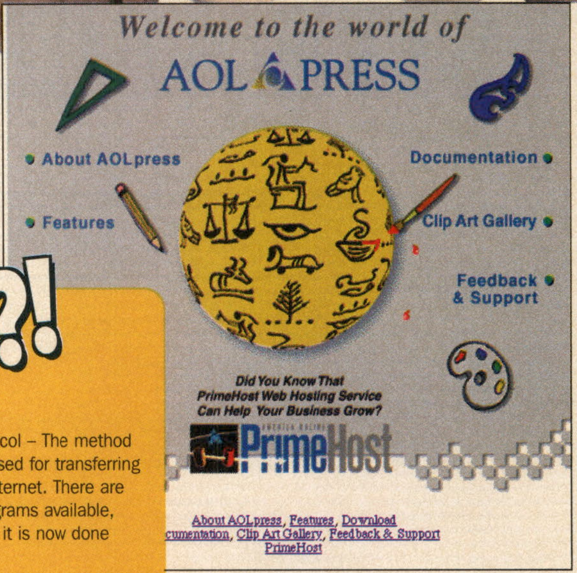
Huh?!

FTP	File Transfer Protocol – The method which is usually used for transferring files across the Internet. There are separate FTP programs available, although much of it is now done over the Web.
NEWSGROUPS	Discussion groups which are held over the Net. also known as Usenet.
NEWSREADER	The software that enables you to read messages (or postings) that people have sent to newsgroups. Built into the popular Web browsers.
PLUG-INS	In the context of the Web, these are 'extensions' to your browser which enhance its functionality. Plug-ins enable you to play sound files or animations, for example.
URL	Uniform Resource Locator. A sequence of characters that specify the address of a resource on the World Wide Web. For example, Paragon Publishing's Web site URL is http://www.paragon.co.uk. A Web page starts with http:// while an FTP site will start with ftp://.

This of course presumes that you are linking in to someone else's FTP server and files, or have uploaded the relevant files to an FTP server in the first place. You might try simply uploading the files to your Web server as with any normal Web page, in which case you should just enter http://www.acme.com/sw/free/download.zip, making sure that you have the correct Web server, path and filename specified.

To complicate things slightly further, you might be interested to know that you can specify the user name and password for the FTP download within the link. For the user 'fred' with a password 'bertie' on the same FTP as above, the link would read ftp://fred:bertie@ftp.acme.com/sw/free/download.zip. However, this step is not needed for normal anonymous FTP servers, and simply doesn't exist as an option for downloads from Web servers!

Readers who don't use Composer should use the standard <A HREF> tag, as if they were creating a link to another Web page. The complete HTML for the above example is as follows: <A HREF="ftp://ftp.acme.com/sw/free/download.zip">Download Acme Wart Cure Here!</A>. On clicking this link, the web browser will connect to the FTP server and look to download the specified file.


Welcome to the world of
AOL PRESS
About AOLpress
Features
Documentation
Clip Art Gallery
Feedback & Support
Did You Know That
PrimeHost Web Hosting Service
Can Help Your Business Grow?
PrimeHost
About AOLpress, Features, Download
cumentation, Clip Art Gallery, Feedback & Support
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AOL Press. This Web package could be just the thing for impoverished students living on beans and pasta

Q I am new to the Net, and with my AOL account I have 10Mb of Web space to produce my own home page. I would like some advice on which is the best Web package to purchase, preferably for under one hundred pounds as I am a student on a budget.

'npea'

A A student who can afford a £100 software package? Surely not! My personal recommendation has always been Allaire's HomeSite package, and there's a free demo and accompanying book on the cover of this issue. However, there are endless free trials and shareware packages available on the Net, and I would heartily recommend that you give these a bash first – to see if you might like to buy the full software in the end. As a student, you might qualify for a discounted price on the software – make sure you have a word with your computing faculty.

You might also consider AOL Press, the proprietary software for your ISP – check out http://www.aolpress.com/. This is an easy-to-use and solid package, which might just mean that you can save your £100 for next year's tuition fee. Oh joy.

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Naming Authority Fees are subject to exchange rate fluctutations

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Virtual Autoresponders NEW	£ 55.00 p.a
Web Site Database Integration	from £ 200 p.a
Mail List Facilities	£ 99 p.a
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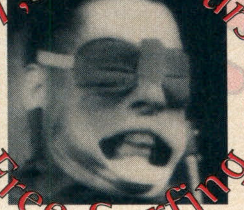

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RENEGADE SOUND WAVES

Not everybody sees the Net as another opportunity to make money. **SHAUN MARIN** *went to meet the London pirate radio station that just wants to play music to the world*

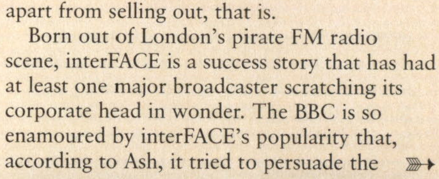
E-commerce, pay-per-view, virtual shops, online services... At first glance, the Net seems to be almost entirely populated by people out to make a quick buck. Whether they're scam merchants chasing a fast profit or big players banking on the long-term success of e-commerce, many organisations see the Net as the trading station of the future. But not interFACE, an online radio station that broadcasts cutting-edge dance music across the world from its basement in Farringdon, London. To these pirates, online at **http://interface.pirate-radio.co.uk**, the Net is about freedom of expression, doing what you want, and getting away with whatever you can. But mostly it's about playing music, lots of music, and doing it for nothing. No adverts, no multi-million dollar corporate investment. Just 60-odd DJs, a pair of record decks, an ISDN link, a group of friendly developers and a couple of listeners with several Megabytes of backbone to donate.

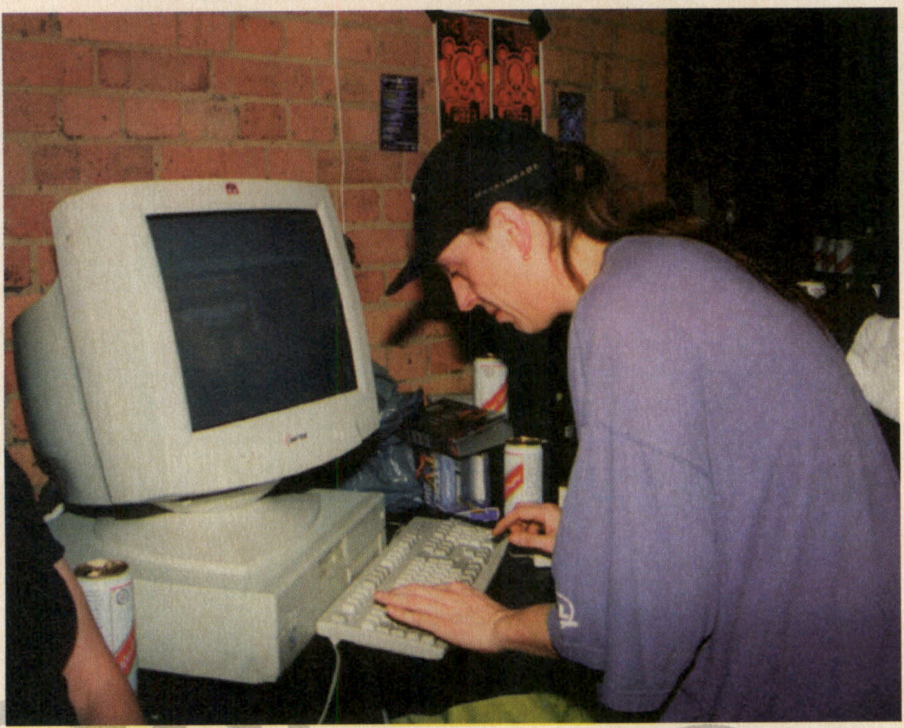
"Our philosophy at interFACE is to do something that's real, something that's not pre-planned," says founding partner 'Mad Ash,' sitting in interFACE's packed, noisy office. "You can't have a new medium like the Internet and just put on the same old crap that they're doing on TV and satellite. It doesn't work that way. We've ended up creating our own little scene here. We've got hold of the underground in London now, and pretty much the whole of the world."

DRUM 'N' BASEMENT

City workers occasionally walk across the pavement above the station, casting shadows into the office below. But the sound of feet on glass tiles can't compete with the drum 'n' bass track blasting out from the studio at the end of the hall – and the station isn't due on air for another two hours. This is one of the most relaxed and laid-back Internet operations you'll ever come across, but you can't deny the success of interFACE, nor its determination to get the job done. By any means necessary – apart from selling out, that is.

Born out of London's pirate FM radio scene, interFACE is a success story that has had at least one major broadcaster scratching its corporate head in wonder. The BBC is so enamoured by interFACE's popularity that, according to Ash, it tried to persuade the





CAN-U-HACK-IT – http://www.can-u-hack-it.com

Mad Ash interacts with listeners in the chat room during an outside broadcast from London's 333 club

station to tell its secret. "They want our information; how we do it. But we just tell them to bog off," he says, laughing. "If they want to go and find out, then let them go and do it themselves. They've got all the friggin' money in the world, let them go and use it."

Even though Ash isn't prepared to subject himself to interrogation at the Beeb – not for "some sandwiches and the possibility of contracts" – he is open about how the station started and how it manages to survive with minimal financial input.

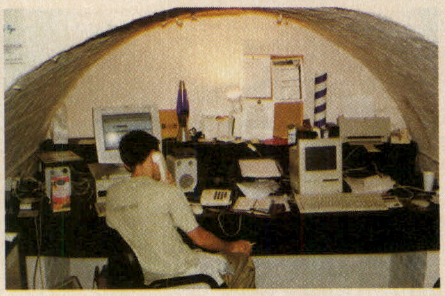
CAN-U-HACK-IT – http://www.can-u-hack-it.com

DIGITAL UNDERGROUND

Apart from the dedication of the interFACE team, its DJs and listeners, the main reason the station can afford to broadcast is thanks to two companies: AL Digital and RealNetworks.

"It just happened that the people I met through doing pirate radio were good contacts for doing this. It's just one of those weird things," he says. "It was a guy called Adam from AL Digital who started it. They supply us with our main server in Chiswick. Adam also instigated the RealNetworks connection."

> "Our philosophy at interFACE is to do something that's real, something that's not pre-planned"



"We were the first users of RealAudio 1. The timing was just right. We were the first people to approach them and that's why they gave us what they did. To be honest, it was just one of those destiny-type things, we just kind of hit a gap at the right time."

What RealNetworks gave interFACE was unlimited free RealAudio licences – as opposed to the 60 that most other operations get – and the use of its server at London's Telehouse. And as interFACE often gets up to 10,000 listeners connected to its streaming live content at any one time, this is pretty generous. In return, RealNetworks gets an increase in the amount of software downloads, a certain degree of kudos, and any new software it develops tested to hell and back by the interFACE team.

COMMERCIAL BREAK

Apart from the station's corporate backers, several listeners are also involved in supporting the station. It seems that interFACE's non-commercial approach encourages the same attitude in its listeners.

"Our fourth server came from a guy called Conrad in Seattle. He runs his own station called the Rave Network, but he just hasn't got the time to dedicate to it," Ash explains. "So he stuck us on his backbone. He's actually got another 40Mb of backbone going up soon, which should be pretty cool."

Another listener recently donated 10Mb of backbone just for the station's archives, before which people had trouble accessing them because of the demand for the live broadcasts. "It seems to be that as long as we're not making any money, we'll get the support," says Ash. "I think that when we start to earn wages here then we'll have to start paying for our bandwidth. But hopefully we'll be big enough to handle it by then."

At present, the station only covers staff expenses such as travel and food. The DJs pay £10 a session to play and most of the full-time staff have outside jobs in order to pay the bills. Several of them, such as Ash, Patch and Eezee E – who looks after the Web site – are DJs. "There is no more money. Not by the time we pay for our leased line, our phone bills and the upkeep of the studio and the computers. Everyone that works here does so for gratis, often in their spare time."

IN IT FOR THE MUSIC

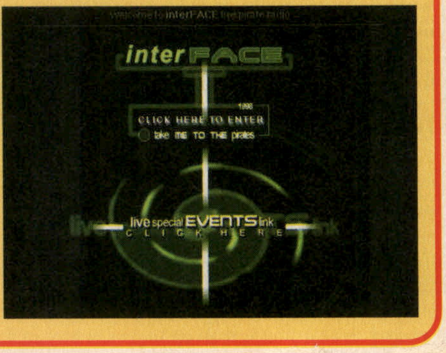
In fact, inte[illegible] is far more than just a radio [illegible]eems as though it's more

RADIO DAZE

INTERFACE currently broadcasts between 4pm and 2am Monday to Thursday, and then round the clock from 4pm on a Friday until Sunday evening. Plans to move to 24-hour broadcasts, seven days a week will be implemented soon. The station can be found at **http://interface.pirate-radio.co.uk**, and you'll need a RealAudio player to listen and watch what's going on. There's a link at the site to download the latest version of the player.

Broadcasts are currently in mono audio and video, but there are plans to introduce a stereo, audio only stream, possibly utilising RealNetworks' new G2 player when the full version is released and the crew at the station are confident of its reliability.

There are also plans to move away from just broadcasting music, and the station is looking at working with underground video and film makers.



of a huge community that just happens to run a radio station as well. The station operates a very popular mailing list – FACEspeak – and its own chat room, which people can visit while listening to the station to request shouts and tunes, and even find out what that last track the DJ played was. “When we first put the chat room up people said it was crap, rubbish,” Ash admits. “But I said that's good, it's got character. If anybody new goes in there they just get swamped by niceness and go away thinking WOW.” A lot of this friendliness is down to a listener known as Brushes – an American who now looks after the area, and who Ash describes as the mum of the chat room. “She's a proper country girl. Her husband's a peanut farmer, they've got two cows and live on a farm.”

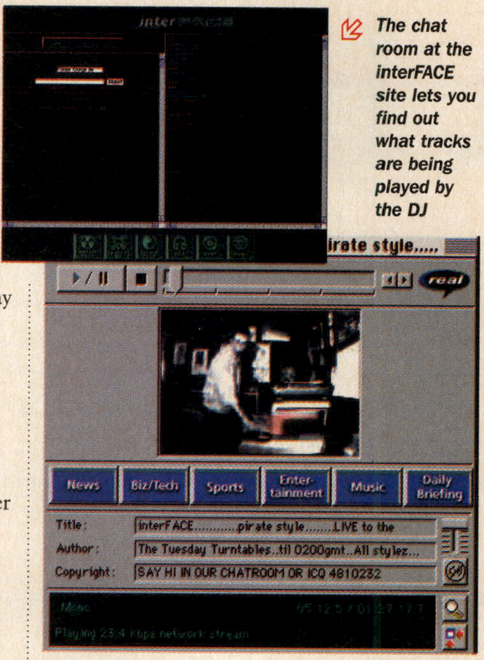
Even though Ash claims to like the character of the chat room, he doesn't see that as a reason not to move with the times. Some Canadian friends of the station are currently building a virtual chat room – again in their spare time. “Eventually we're looking to have a virtual studio with a couple of decks, where people can choose tracks and then muck about a little bit. Mix a few tunes.”

FUTURE SOUND OF LONDON

The station recently changed its legal status by coming to an agreement with the MCPS – which regulates artists' royalties – to pay for playing music. Because the Net is such a grey area in this matter, and because interFACE doesn't actually make any money, the deal had to be tailor-made for the station.

> **“You can't have a new medium like the Internet and just put on the same old crap that they're doing on TV and satellite”**

“If we've got the money I'm well up for giving the artists money,” Ash says. “I've got so many coming through here I'd be a mug not to. Just as long as I can afford it really.”



Title: interFACE...........pirate style.......LIVE to the
Author: The Tuesday Turntables..til 0200gmt..All stylez...
Copyright: SAY HI IN OUR CHATROOM OR ICQ 4810232

Playing 23.4 kbps network stream

The chat room at the interFACE site lets you find out what tracks are being played by the DJ

And this is the point – being able to afford to do things. At some stage interFACE is going to want to make some money, if only in order for the staff to survive. “We could turn around in the next few months and probably be millionaires if we really wanted to, and it is frustrating working with the equipment we have down here,” Ash says, adding that there's no way the station would suddenly become commercial.

“I still believe that over the next six months to a year we'll make our money out of other things. We're going to have an online shop, which will sell vinyl and other stuff from our DJs, including tapes of the sets. We're also doing outside broadcasts that will start to bring in some revenue.

“As far as the station itself is concerned there's no way it will get splattered with any form of advertising along the way. But the bits we are plugging around the site now should bring in money to allow us to expand, but without tainting what interFACE is all about.”

For interFACE, remaining true to your origins is what it's all about. Using a new medium to do new things. Ash admits to sometimes getting a bit overwhelmed by it all, but vows that the station will continue to grow in the organic style that has served it well until now. interFACE is even putting off the start of 24-hour broadcasting until the time is right.

“Sometimes it does get a little bit scary, and you start to fly a little bit. But we keep it restrained, we never let it go. I recently came back from Canada, where a station over there is broadcasting us over the FM, which reaches something like 25,000 listeners. People were coming up to me and saying, ‘Wow, Ash, pirate radio, London, wicked,’ which was really, really good. Because I came back and thought: now I really do understand where we're heading.”

CATCH THE PIRATES

FORTHCOMING special live broadcasts will be announced by interFACE, when and if they see fit – “We just play music, if people find out about it all well and good, if they don't we don't really care. We've got a bad attitude like that” – but these are a selection we managed to persuade them to let us in on.

29 SEPTEMBER:	Salsa Pa Ti @ Bar Rumba
1 OCTOBER:	Kungfusion (Ninja Tunes) @ 333
10 OCTOBER:	T4 (UK Dance) @ Venue to be confirmed
10 OCTOBER:	Earth Dance @ The Rocket
21 OCTOBER:	Video thing @ Blue Note

The station is also starting its own monthly club night in October. Called Link Up 98, the regular event will feature DJs from the station as well as live connections with other clubs around the world. Link Up 98 starts on 17 October at the Rocket in North London. Check out the site for more details nearer the time.

Other events include more live broadcasts from festivals next year – maybe even interFACE's own festival – and a massive millennium party. See you there.

Eezee E looks after the interFACE Web site

The interFACE Webcam: a window on the pirates

CAN-U-HACK-IT – http://www.can-u-hack-it.com

The music is still the most important thing at interFACE. So those site updates can wait a little while

CAN-U-HACK-IT – http://www.can-u-hack-it.com

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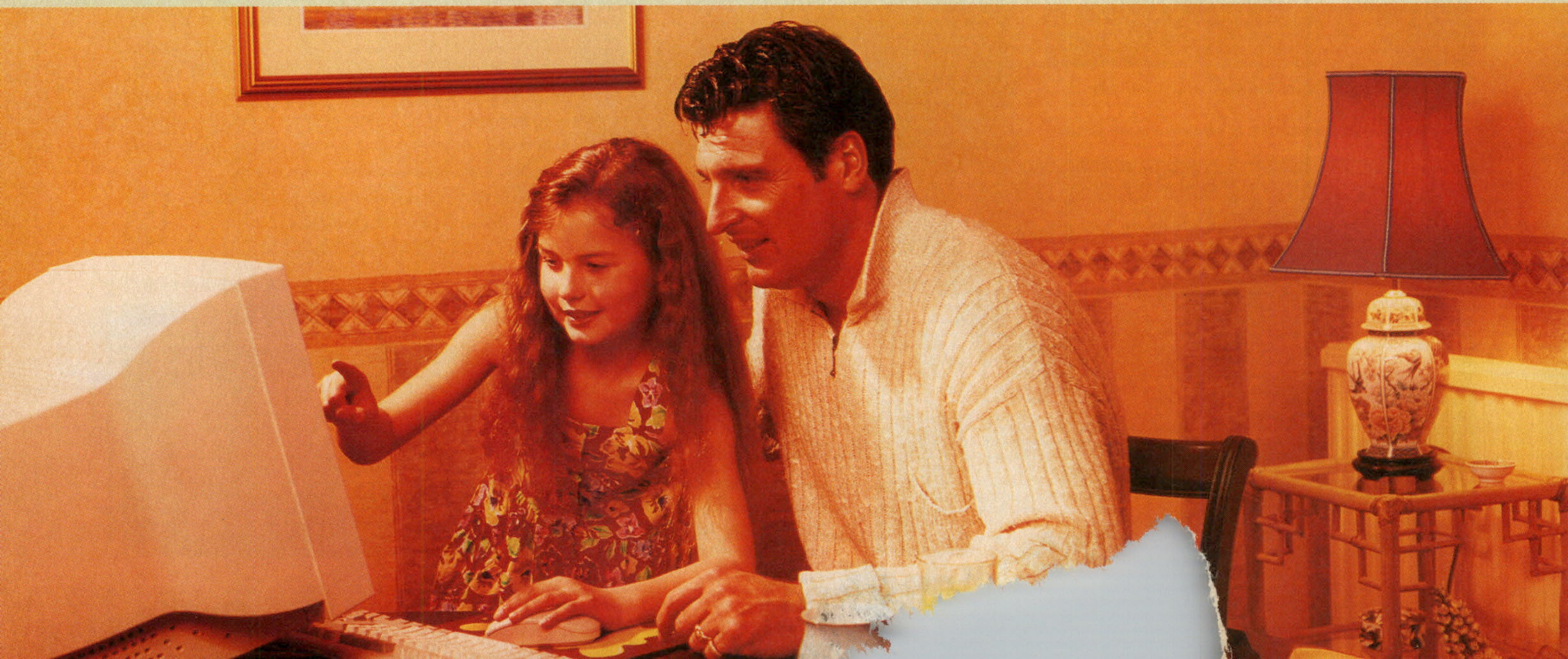
AOL	✗	✓	✗	10	£71.40	£93.60	£179.40	£179.40
Compuserve	✗	✓	✗	5	£78.00	£101.40	£241.80	£282.00
Demon	✗	✗	✓	15	£132.50	£132.50	£132.50	£132.50
Virgin	✗	✓	✗	10	£122.45	£122.45	£122.45	£122.45
Pipex Dial	✓	✗	✗	5	£151.75	£151.75	£151.75	£151.75
Global	✓	✓	✓	3	£89.99	£89.99	£89.99	£89.99
FORCE9	✓	✓	✓	15	£84.00	£84.00	£84.00	£84.00



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UUNet Pipex	✗	✓	✓	**None**	**£500**	**£2000**	**N/A**
Global††	✓	✗	✓	**None**	**£500/£600**	**£1000**	**£1500**
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E-commerce is set to revolutionise the business-to-business market place. **CHRIS BARLING** *of Actinic Software explains the benefits of trading on the Net*

INTERNET GOLD *rush*

The PR blitz of e-commerce has begun, the skies are filled with the drone of oncoming hype, and we are left wondering just how our jobs and businesses will be affected. Not only is it impossible to look at a trade journal without reading about e-commerce, it's finally starting to happen on the ground. Particularly in the US, where there are now many live sites, many success stories and some failures. E-commerce is starting to break in the UK as well, and the fever pitch rivals that of a gold rush.

In my mind, it is most appropriate to think of e-commerce as another tool in the evolution of getting closer to customers. The last few decades have seen major changes in the methods of selling. We have seen firms prosper who put customers first, and empower their front line customer contact staff to make the decisions customers need. It may be a simple gesture, such as McDonalds taking back a half eaten burger because the customer isn't happy, or it might be providing car insurance on the spot over the phone.

ABOUT ACTINIC

CHRIS Barling is Managing Director of Actinic Software. Actinic Catalog lets you sell securely from your Web site for under £350. The product is British designed and built, and won numerous awards. For details, contact Actinic on 01932 860524 or see http://www.actinic.co.uk.

ACTINIC
CATALOG

The Web is a way to get closer to customers. It is a way to continue the process of thinking how they would like to conduct their business with your company.

TECHNOLOGY SHIFT

Although a lot of commentary has focused on the consumer market, the rise of the Internet is a major technology shift which will affect all businesses. Every technology discontinuity makes possible the genesis of a brand new industry, as the industries affected fail to respond. This needn't be the case, but human nature and the economics of being in pole position in an existing industry blinds eyes to both the opportunity and the risk.

Will existing companies dominate e-commerce or will a new breed take over? The answer will be mixed. Many of the technology suppliers will be new, and many existing companies will adopt the new technology as it prospers. There are sure to be some major new winners, just as Direct Line came from nowhere to dominate car insurance, based on innovative use of the telephone.

> **"The rise of the Internet is a major technology shift which will affect all businesses"**

The key for those of us already in business is to keep our eyes wide open.

OPPORTUNITY KNOCKS

Now lets look at the differences between selling to consumers and selling to businesses.

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Browse books by subject
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Featured This Week
It's a War out There
In Music
Miles Tones
Featured in the Media
The Dean's List

Will Amazon.com become the first e-commerce site to break the $1bn a year turnover mark?

In business, both parties are more likely to have Internet access – Internet penetration of businesses is already higher than in the general population and climbing fast – driven mostly by email. This presents a more ready market for business-to-business sales. Also, the value of each individual transaction in business-to-business tends to be higher, as there are fewer parties involved (around three million total businesses in the UK including self-employed, versus over 50 million consumers). For this reason, there is less sensitivity to costs and more willingness to invest in new technology in the business-to-business market.

The business market is also less concerned with the 'shopping experience.' Professional buyers are less influenced by the 'touch and feel' factors that are personified by retail outlets. So although shopping on the Net is unlike the retail experience, business-to-business buyers aren't influenced by this fact.

Chris Barling with Kevin Grumball, Technical Director of Actinic Software

MILESTONES TO THE CYBERTRADING SOCIETY

LET'S get the crystal ball out and look at the key milestones we can expect on the road to e-commerce.

The first Internet-only company turns over more than $1bn a year (looks like this will be Amazon.com). This will be a red letter day as it will indicate that e-commerce has really come of age. I believe that this will happen in 1999.

Software becomes established that makes business-to-business selling over the Internet as simple and cheap as installing a fax machine. The decision to sell on the Net moves from strategic to routine. Another one for 1999.

The impact of Internet sales will start to restructure whole industries. This will start becoming clear around the year 2000 as more sophisticated software emerges.

The articles on e-commerce stop appearing in the mainstream press and retreat into specialist marketing and IT publications. I believe that we have to endure the hype and articles for another couple of years yet!

And finally, the first significant traditional company announces that it will only accept orders placed over the Net, as it can no longer afford to accept inefficient paper or phone orders – and your guess for this date is as good as mine. Who knows, maybe it will never happen.

A good example of this is the business stationary market. Over the last few years, Viking, using mail order, has risen steadily, and the majority of businesses buy through this or a similar route rather than visiting the local WHSmith. This is despite the fact that Viking is a mail order company, and does not try to impress with the design of its catalogue.

Concerns about security plagues the consumer market, where credit card processing is mandatory, and where there are few clues about who may turn up next to buy. As a contrast, in the business-to-business market, buyers usually know sellers before they buy, and purchases are not paid for by credit card. Therefore security is less of an issue.

PRICING AND DISCOUNTING

In the business arena, there are generally more complex interactions between the parties involved. Each customer may have their own price list, there may be special delivery arrangements and so on. The Internet can provide major benefits in this scenario. For instance, it is uneconomic to print a different catalogue with different prices for each customer – but discounts can certainly be tailored so that each company sees their own prices over the Net. Again, it is difficult to train telesales staff to quickly provide the different terms to incoming callers, but this can be provided with ease across the Net. The end result is that the Internet can be a particularly useful tool for business-to-business transactions.

FACTS AND FIGURES

ACCORDING to the US Chamber of Commerce, slightly more than a third of Net users already place orders over the Web. The US Direct Marketing Association (DMA) also has some key facts. Direct marketing sales in the United States in the business-to-business market were $542 billion in 1997. The reason this is interesting is because it's sales made under the direct marketing banner (sales by mail, off-the-page, and phone) that are the most likely to switch to the Internet.

It turns out that the size of the potential consumer and business markets are roughly comparable, and the potential for Internet sales is huge. And what's true for America will be true for Europe in the next couple of years.

Stories on Net commerce tend to focus on sales to consumers. After all, each one of us is a consumer. On the other hand, only a minority organise sales to other businesses, or buy on our company's behalf. This shouldn't hide the fact that based on the drivers that we have examined, business-to-business sales are going to eclipse those made to the great British public. And it's already happening.

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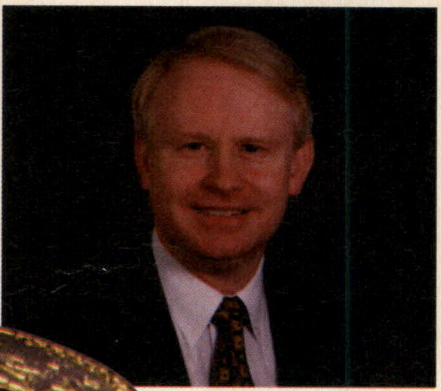
Dell is running at over $5 million a day from its Web site at http://www.dell.com

IN THE REAL WORLD

Let's look at a couple of the major winners in e-commerce – Cisco and Dell. These companies are remarkable for a number of reasons. Firstly, they are notable for the stunning progress they have made online. Dell is running at over $5m a day in Internet sales and Cisco expects to make more than half of its total sales from its Web site – $5bn this year. Secondly, they both have a high proportion of business-to-business sales. But, as they are both in the computer industry, it's fair to assume that a higher proportion of their customers are online than for an average company. Dell is also notable for espousing the direct sales model. It doesn't sell through any middlemen.

Please select the country you are in:

However, it's interesting that these two success stories in e-commerce are not new Internet players, but well established corporates. But, both Cisco and Dell have come from nowhere to dominate their markets in the space of a few short years, and haven't had time for their culture to fossilise, or their founding entrepreneurs to pass off the scene. Maybe this is part of the explanation.

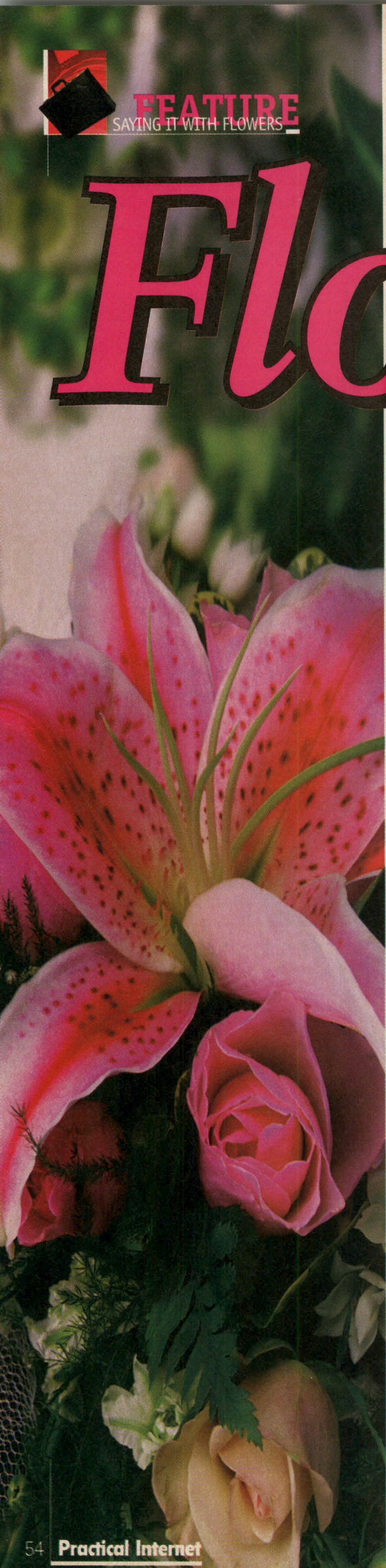


Chris Barling is Managing Director of Actinic Software

THE NEW GOLD RUSH

In the days I worked for Reuters, a colleague remarked we had invented the shovel in a gold rush. In this case the gold rush was the end of fixed exchange rates, and the shovel was the provision of up-to-the-second information on the precise currency rates being traded.

At my company, Actinic Software, we're betting the new gold rush will need shovels too. That's why we are concentrating on building tools that will help the e-commerce revolution take place. For the busy trader, it's a difficult time. It's already clear that business-to-business sales will be affected by the Internet, and that Forrester Research's prediction, that by 2002, 2.3 per cent of US GDP will be e-commerce business-to-business sales, is quite reasonable. For many, the next few years will see global competition move from an abstract possibility to a fact of life. Whole industries will restructure. And in 10 years' time, using the Internet for ordering will be as normal as arranging your car insurance over the phone. Burying your head in the sand is not an option. So dip your toe in the e-commerce world to start the learning process. Exciting times are here, and I can't wait to see the results of the most dramatic business revolution of my lifetime.



SAYING IT WITH Flowers

Expanding your business onto the Net opens up a much larger market in which to trade. **SIMON RICHARDS** *talked to Internet consultancy port80 about giving a small North Yorkshire florists' shop a global reach*

The Internet enables companies to target individual people with specific messages and products. It's therefore no surprise that businesses are looking to set up shop online.

This was the case with Flowers by Design, when designer florists Celia Page, Marilyn Baldwin and their team opened up shop at **http://www.flowersbydesign.co.uk**, becoming the first online florist in Europe to offer the secure ordering of individually designed flower arrangements over the Net.

The actual shop already makes courier deliveries throughout the UK, so using the Internet to extend the service to people abroad who have friends and relatives in the UK, was a natural progression.

DESIGNER DIFFERENCE

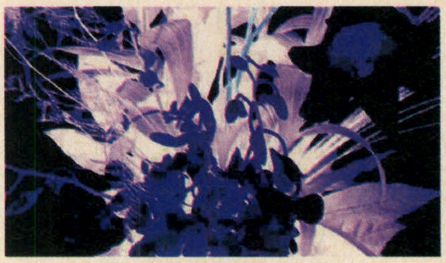
Flowers by Design went to Internet consultancy port80 for advice on how to set up a Web site. Senior Designer Celia Page explains, "We had been called by many companies offering us a Web site, but none seemed to want to learn about our company. We realised we had to spend a little more time and money developing a long-term strategy for what we would do on the Web."

Successful Internet business case studies often polarise into very small niche organisations and large companies that can offer everything. Jason Finch, Strategy Director of port80, says that "Flowers by Design is a niche business. They're not like any other florist online and that's the key to creating a concept and marketing strategy for the company. So here we have an exciting project where a small but exceptional florist can compete with the largest players in the marketplace. The Flowers by Design customer is at the high-end of the market and appreciates the message that sending a unique and stylish floral gift puts across to the recipient. No other Internet florist caters for this type of customer."

> "If a company is to be successful online, it has to prepare for that eventuality from day one"

MANAGING GROWTH

Before port80 could get started, though, certain real-life issues had to be resolved. The shop didn't have a computer with a connection to the Internet and none of the team was that familiar with email or the concepts of online communication, so training sessions were part of the plan. Also, there weren't enough staff to cope with the potential explosion in orders that the Internet might – or might not – bring to the business.



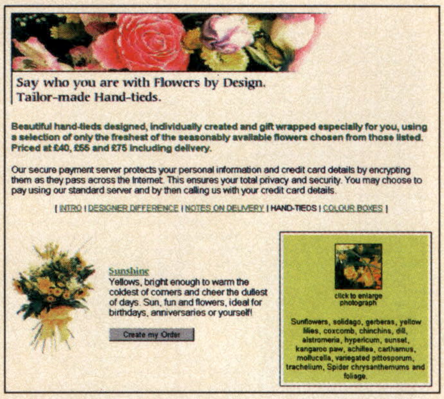
The Flowers by Design home page, at http://www.flowersbydesign.co.uk

"When companies think about setting up a Web site, management issues are often glossed over as irrelevant. If a company is to be successful online, it has to prepare for that eventuality from day one. Growth may be steady, but if the potential is there, it may be exponential," says Finch. "Many businesses never get to this point because they start out on the wrong footing, but Flowers by Design has spent more time thinking about the issues involved, and planning for and evaluating the progression of its business on the Internet, than it has on the production of the site. This should mean the business can maintain the appropriate level of service."

KEEPING IT SIMPLE

The Flowers by Design Web site has to be simple, clean and straightforward. Behind this lies many hours of planning the gifts to offer on the site, what information to include, and how to design and structure the site to communicate the key messages of sending a Flowers by Design gift.

"The site is designed with the customer and ease-of-ordering in mind. With the range of options available, it's important not to make



Say who you are with Flowers by Design.
Tailor-made Hand-tieds.

Beautiful hand-tieds designed, individually created and gift wrapped especially for you, using a selection of only the freshest of the seasonably available flowers chosen from those listed. Priced at £40, £55 and £75 including delivery.

Our secure payment server protects your personal information and credit card details by encrypting them as they pass across the Internet. This ensures your total privacy and security. You may choose to pay using our standard server and by then calling us with your credit card details.

[INTRO | DESIGNER DIFFERENCE | NOTES ON DELIVERY | HAND-TIEDS | COLOUR BOXES]

Sunshine
Yellows, bright enough to warm the coldest of corners and cheer the dullest of days. Sun, fun and flowers, ideal for birthdays, anniversaries or yourself!

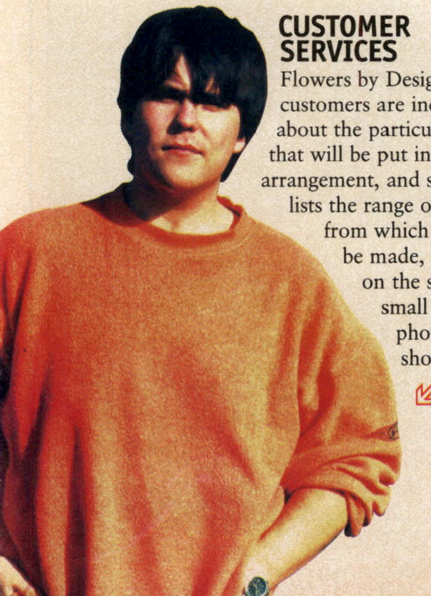
Sunflowers, solidago, gerberas, yellow lilies, coxcomb, chinchins, dill, alstromeria, hypericum, sunset, kangaroo paw, achillea, carthamus, mollucella, variegated pittosporum, trachelium, Spider chrysanthemums and foliage.

The hand-tied selection. A full page showing six types of arrangements

the process difficult or less than obvious, so we include clear buttons and navigation. We also looked at ways to offer extra services to customers that are not available from traditional florists but which can be facilitated by the Internet," says Finch.

An important issue to address was that of making the selection process intuitive – presenting customers with too many options can daunt them just as much as presenting too few can irritate them. The Flowers by Design team decided to produce a dozen different primary arrangements, divided into two distinct types: hand-tieds and colour boxes. Each arrangement has its own style, but also has the scope to be modified to include other flowers, or to be arranged in a way that is accurately styled for the particular occasion and place to which the arrangement will be delivered. "It is bewildering how a florist could offer a standard bouquet that is equally appropriate for a funeral and a wedding, but few online flower shops ask about the occasion or the relationship of the recipient to the sender," comments Finch.

"Millions of people may visit an online shop but unless the right messages have been communicated to them it has failed"



Jason Finch, port80's Strategy Director

CUSTOMER SERVICES

Flowers by Design customers are inquisitive about the particular flowers that will be put into an arrangement, and so the site lists the range of flowers from which gifts can be made, depending on the season. A small photograph shows an example of each arrangement, with a paragraph of text explaining its personality. A large high-resolution photograph of each is also available.

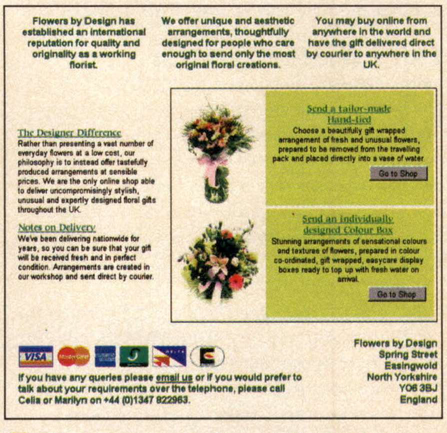
Once the primary arrangement is selected, the site guides customers through a three-stage order form, asking for information that will help the design team to produce the tailor-made gift. The order form includes the current UK time, and gives information about the earliest date that the gift can be delivered. The system checks that the shop can meet the delivery date and that all the relevant information has been included before passing the customer to a secure site for the entering of credit card details. Security is a hot issue, and many people will not order online unless the Web site itself offers as much security as possible – in reality, it means that credit card information is encrypted, and so cannot be intercepted en route between the customer's computer and the machine that hosts the Internet site.

GLOBAL PROMOTION

Flowers by Design is not a global brand. For two years it has developed a reputation locally in North Yorkshire but, as with many small businesses, has not been given the opportunity to promote itself at a national or international level. Global outreach is much easier, and certainly more cost-effective, through the Internet than by any other medium, and there have even been cases of shops closing their doors to the public and concentrating solely on online selling.

However, the competition online can be as intense as it is offline. The profile-raising has to be there, the value-added services, the attention to detail, and customer relationship building all need to be present – the Internet doesn't simply make a company successful overnight.

Flowers by Design's success on the Internet will be dictated by its promotion and marketing. Issues such as being highly visible on search engines when people look for 'flower delivery,' to possible advertising on, and tie-ups with, related Internet sites. Jason Finch explains, "there are many sites on the Internet that should be linking to Flowers by Design, and many people that should be talking about it and what it's trying to provide for the online community. One of our most important tasks is to facilitate the spreading of the word, in order to expose as many people as possible to Flowers by Design."



Flowers by Design has established an international reputation for quality and originality as a working florist.

We offer unique and aesthetic arrangements, thoughtfully designed for people who care enough to send only the most original floral creations.

You may buy online from anywhere in the world and have the gift delivered direct by courier to anywhere in the UK.

The Designer Difference
Rather than presenting a vast number of everyday flowers at a low cost, our philosophy is to instead offer tastefully produced arrangements at sensible prices. We are the only online shop able to deliver uncompromisingly stylish, unusual and expertly designed floral gifts throughout the UK.

Notes on Delivery
We've been delivering nationwide for years, so you can be sure that your gift will be received fresh and in perfect condition. Arrangements are created in our workshop and sent direct by courier.

Send a tailor-made Hand-tied
Choose a beautifully gift wrapped arrangement of fresh and unusual flowers, prepared to be removed from the travelling pack and placed directly into a vase of water.

Send an individually designed Colour Box
Stunning arrangements of sensational colours and textures of flowers, prepared in colour co-ordinated, gift wrapped, easycare display boxes ready to top up with fresh water on arrival.

If you have any queries please email us or if you would prefer to talk about your requirements over the telephone, please call Celia or Marilyn on +44 (0)1347 822963.

Flowers by Design
Spring Street
Easingwold
North Yorkshire
YO6 3BJ
England

This contents page allows people to select the type of arrangement and to find out more about Flowers by Design

Zoomed pictures of all arrangements are available to give a close-up view of the presentation of the flowers

WHAT OF THE FUTURE?

The site is already attracting customers and generating orders, but the next phase is to provide extra services. Giving Flowers by Design account holders' discounts, online address books, and email reminders for special occasions, are all ideas that will help build loyalty for online shoppers, but the crux of building the business will come from ensuring customers find the site and are captured by it. "Millions of people may visit an online shop but unless the right messages have been communicated to them before, during and after they have experienced the site itself, it has failed," says Finch. The priority is to create a strong brand image and heighten awareness. The Flowers by Design site must now develop around the opinions of its customers, and its central concept of offering a distinctive and individually-designed product over the Internet.

ABOUT PORT80

PORT80 is a specialist Internet consultancy offering advice to companies looking for an effective online presence. It also helps clients to write Web production briefs and produces commissioned research reports on issues such as sector and competitor analysis. The firm's clients include Toshiba Europe, UniChem, English National Ballet, Marie Curie Cancer Care, and a host of smaller companies. Email jason@port80.com or call 0870 050 8080.

LEGAL AID

Once again, **KEN CHIA** *and* **MICHAEL MAHONY** *of IT specialist law firm, Hammond Suddards, answer your legal queries. Send your questions to pi@paragon.co.uk*

CYBERSTALKING FEARS

Q A worrying thing that I have read about before is 'cyberstalking' – where people are stalked on the Net. I understand that this is rare, and that as long as you don't offend people online you're probably pretty safe. But a friend who uses IRC a lot has said that she occasionally gets emails from people she doesn't know. Although they're not actually threatening, it is alarming to know that people can – if they really want to – 'track' you across the Net to some degree. What sort of action would I take if I found myself in a similar situation?

A Although we do not have legislation in Britain specifically targeted at cyberstalking, it would still be considered an offence under the 1997 Protection from Harassment Act. This means if that someone has alarmed or caused you distress on at least two occasions, then he/she has committed a criminal offence punishable by up to six months imprisonment (or five years imprisonment if he/she has put you in fear of violence).

You have also a civil claim against him/her for damages for anxiety and any resulting financial loss and an injunction preventing further harassment. Obviously, it is better if you reduce the chances of being stalked in the first place: e.g. by adopting an anonymous or neutral email address or pseudonym such as Jsmith rather than JaneSmith@xxx.com. The Cyberangels site at http://www.cyberangels.org has other valuable tips.

HOW CAN YOU STOP SPAM?

Q Are their actually any laws in the UK prohibiting unsolicited commercial email – spam? Sure, we can complain to a spammer's service provider, or set up our own mail filters, but if we're paying money to download this email, surely there's some sort of legal recourse?

A Under the new 1998 Data Protection Act, you will have the right to require the spammer to cease processing for the purposes of direct marketing, and if it fails to comply, to get an injunction from the court. If you have suffered damage as a result of a spammer's breach of the Act (e.g. by unfairly processing your personal data) then you are entitled to be compensated for that damage and any distress suffered, as well. However, such damages are likely to be small, and unlike the US, where large fixed penalties for each piece of spam are being legislated for, it may not be worthwhile suing.

POLICING THE NET

Q I was wondering if you had any information as to how involved the British police are in the Internet. I understand that with issues such as illegal pornography or stolen software, they would show an interest, but how would they know unless it is reported to them? Does the police have a special 'Internet department' these days? And do they actively 'police' the Net at all?

A The National Criminal Intelligence Service is known to independently 'police' the Net for child pornography, although a large number of tips are being increasingly received from complaints to the Internet Watch Foundation. These tips have been predominantly about child pornography, with relatively small proportions about other matters such as financial scams, adult pornography, racism and malicious emails, and the NCIS will forward them to the relevant UK police force or overseas body for investigation and prosecution.

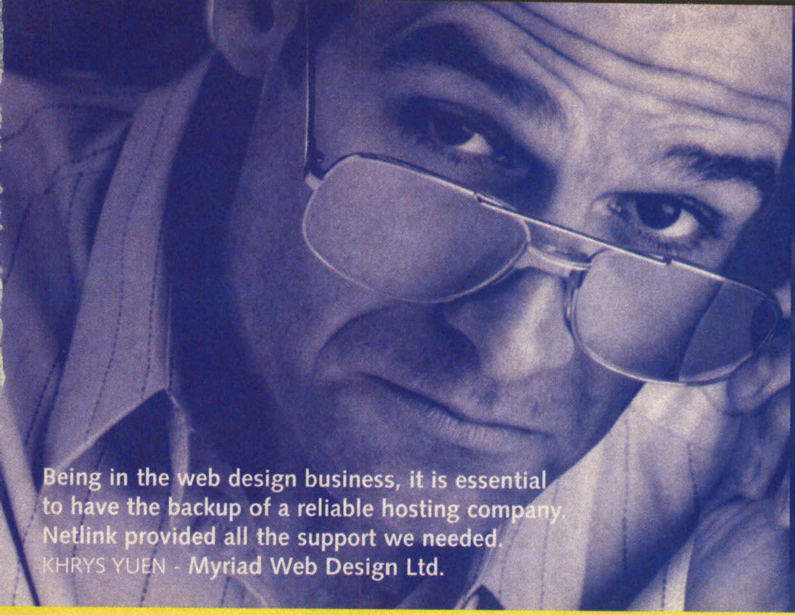
While general sweeps of the Web and the Usenet are allowed under EC law and member country legislation, tapping specific email messages is prohibited and tapping by the police would almost certainly require the consent of the Home Secretary. The European Commission is currently looking at proposals to formally approve such moves, however, and even recommend that officers use email taps to combat the problem of organised crime.

CAN I WRITE REVIEWS?

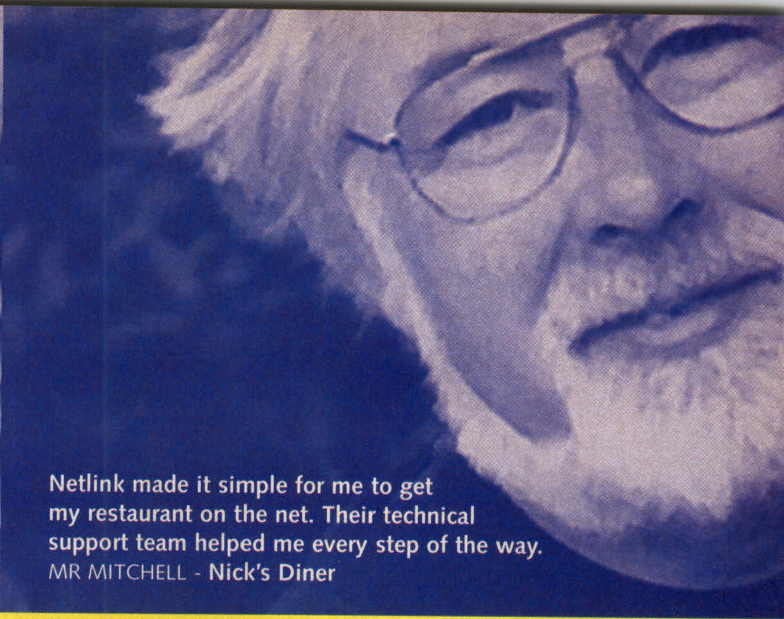
Q A friend and I are considering creating a Web site carrying reviews of nightclubs, restaurants and theatres in our home town, so that potential visitors can check out the town before they arrive. Can we just go ahead and do this, or do we need permission from each of the establishments that we want to write reviews of?

A You do not specifically need permission, but you need to ensure that the review is accurate and that you acknowledge their trademarks. If you decide to link to their sites, then you need to be careful, in light of recent cases, if you have advertising on your site and you frame their Web pages, or bypass their home page or advertising.

Answers supplied by Ken Chia and Michael Mahony of IT specialist law firm, Hammond Suddards. Call 0171 655 1000 or email ken.chia@hammondsuddards.co.uk or michael.mahony@hammondsuddards.co.uk.



Being in the web design business, it is essential to have the backup of a reliable hosting company. Netlink provided all the support we needed.
KHRYS YUEN - **Myriad Web Design Ltd.**



Netlink made it simple for me to get my restaurant on the net. Their technical support team helped me every step of the way.
MR MITCHELL - **Nick's Diner**

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SCHWARTZ
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Looking for sites to motivate your modem?
Check out this month's selection as chosen by **STEVE HILL**

Siteseer

WEB SITES FOR SORE EYES

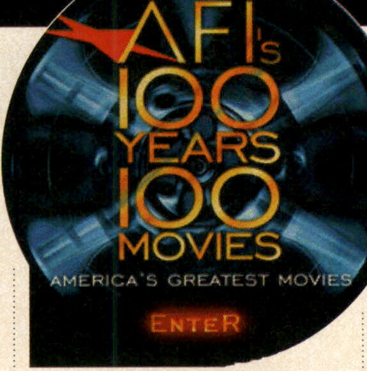
The official Web Site www.uefa.com
in the Net
ERICSSON
...for secrets uttered into troubled ears, these men were known as The Whisperers...
Search the
retroactivebaggage
Gig Guide

AFI's America's Greatest Movies

http://www.afi.100movies.com/

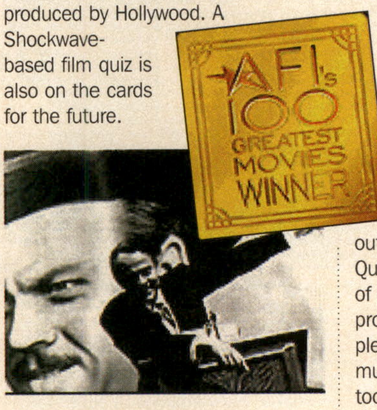
Picture the scene – you're down the local boozer with a group of mates and the conversation starts flagging a little. In a vain attempt to liven proceedings up, every person around the table is asked to nominate their favourite film. "*Schindler's List*," comes the response from one person. Another person says "*Betty Blue*." But there is always one who ruins the atmosphere completely by nominating something crap like *Speed 2*

The Top 100 list of America's greatest movies was compiled in a similar way. Except that the people who voted were leading film directors, members of the prestigious AFI (American Film Institute), and they were not sitting in a pub.



With a Top 10 consisting of popular choices such as *Citizen Kane*, *Casablanca* and *The Godfather*, there are few surprises. If you mouse click on each film title, you are presented with the reasons why the panel thought the film was so great. This comes with all the normal information about directors, actors and dates.

If this review makes it sound a bit drab – it really isn't. You will become addicted as you find yourself ticking off the films you have seen and saying "oh, I've just got to see that," at the ones you haven't. These are all great films, and partly make up for the *Speed 2s* and the rest of the rubbish that is so frequently produced by Hollywood. A Shockwave-based film quiz is also on the cards for the future.



Daily London

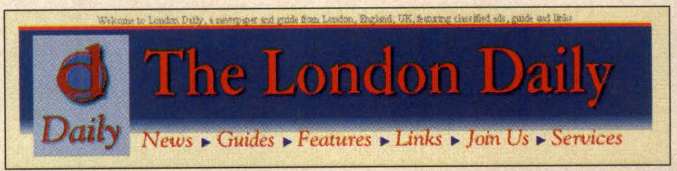
http://nuxnet.com.br/london/

Following hotly in the footsteps of the rather splendid This Is London (**http://www.thisislondon.com/**), it would seem there is no end of guides to the capital. But this one is a little different – it's targeted at foreign tourists.

Packed full of practical advice, it reviews the best places to eat, drink and sleep. "London can be cool and damp even in the summer, so make sure you bring a jacket," is Daily London's advice when packing a suitcase.

The site even offers advice on dealing with the call of nature: "The safest place to go is any McDonalds. They have the cleanest and most comfortable toilets in UK." Is there anyone that doesn't know that.

When we visited, the daily news service was not in operation – that goes live in October. Despite this, it's a really useful site for visitors to London – whether you're foreign or not.

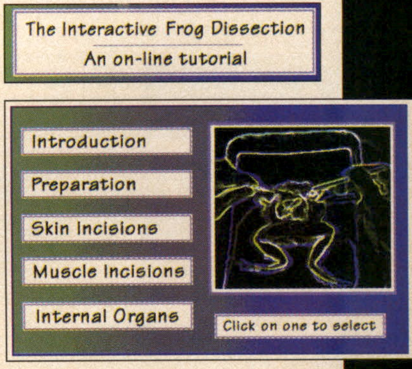


Welcome to London Daily, a newspaper and guide from London, England, UK, featuring classified ads, guide and links

Interactive Frog Dissection

http://curry.edschool.Virginia.EDU/go/frog/menu.html

Putting a frog in a GCSE biology class is like throwing a Christian to the lions. We wonder if the unfortunate frog knows that it will not only end its life by being cut up by a 15-year-old and having its intestines pulled out, but that it will also have them chucked half way across the class room at a teacher. Of course the point of carrying out a dissection is to learn how creatures live and breathe. You've guessed it, thanks to that good-old Internet you can now learn how to cut up animals properly. The step-by-step guide takes you through the preparation, making the first skin incision and then onto the gory bit of pulling out the muscles and internal organs. Quicktime video clips illustrate many of the more complicated procedures. While we are always pleased to see the use of multimedia on Web sites, this was too much! Animal rights fanatics should avoid it like the plague, but biology teachers and masochistic teenagers will each find a purpose for it.



Condomania

http://www.condoms4u.com/

Buying condoms from the chemist can be more than a little embarrassing. As you strut up to the counter to pay, it can feel like the entire world is interrogating your sex life. It can prove expensive as well. Not only do you have to pay for the rubbers, but a toothbrush, flannel, and can of Coke as well. You don't actually need these items, but you just have to buy them in a vain effort to keep some credibility.

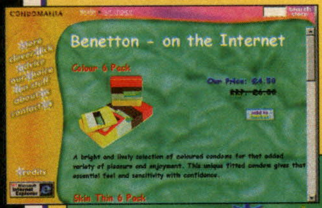
It doesn't take a genius to realise that the anonymous nature of the Internet could be harnessed to solve this problem. Enter Condomania, a site that makes purchasing a simple and easy process. It also has a massive stock that will put your average branch of Boots to shame.

To begin with, a character called Clever Dick quizzes you on your condom needs. He then advises you on the best type.

Fashionable types will only want to be seen dressed in the United Colors of Benneton. Yes, the well-known Italian clothes retailer has moved from producing jumpers you wear on your upper torso to items for the lower part of your body. As you would expect, they come in a range of trendy colours.

Of course, we at *Practical Internet* will only be seen in one brand – the Trojan Magnum. At 15 per cent larger than a standard condom it's designed for those who find other condoms restrictive. I'll have 300 of those, please!

Overall, this is a sexy site that matches wholesome fun with sensible advice. Purchasing is via a secure credit card system, and many brands of condom are discounted. If you want a good laugh, check out the Java-based 'catch the sperm game.' It kept me amused for hours.



A bright and lively selection of coloured condoms for that added variety of pleasure and enjoyment. This unique fitted condom gives that essential feel and sensitivity with confidence.

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store fully secure store
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FUN 'N' GAMES
about
SEAL OF APPROVAL
Practical Internet

Athenaeum Hotel

http://www.athenaeumhotel.com/

SEAL OF APPROVAL
Practical Internet

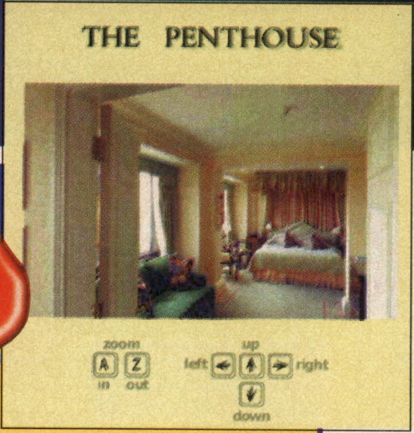
The slogan of this hotel is “where your friends are.” But unless you happen to be drinking pals with Elton John, Richard Branson or the Spice Girls, you won't find many of your mates in this London hotel.

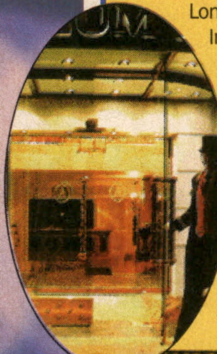
In fact very few people will be able to afford even a few minutes, much less a night shacked up here. London has some of the most expensive hotels in the world and prices at this Piccadilly hotel range from £235 a night to £650 for a penthouse suite. Think we'll stick to staying in B&Bs.

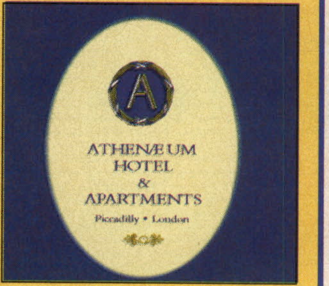
Be you rich or poor, though, we are all entitled to our dreams. And with this site, you can dream in virtual reality as you take a tour around the grand corridors which were built in the 1920s.

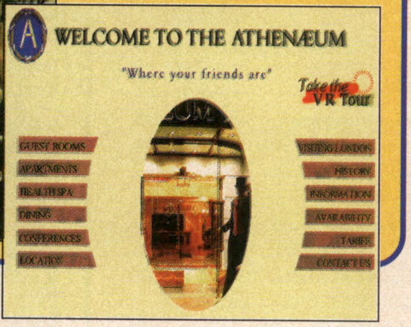
Check out the bathrooms, which are the size of most people's living rooms, and the chandeliers that hang off every ceiling. If you want to know how the other half live, then this is the place to come.

Virtual tours aside, the Web site has a very good layout and is particularly easy to navigate. If you can afford it, this site gives you all the information you need to make a booking. If you can't, well, then you can join everyone else and go green with envy. Doesn't it just make you wish you were on the board of a former nationalised utility?


THE PENTHOUSE






WELCOME TO THE ATHENÆUM
“Where your friends are”

Just Java Design

http://www.congreve.com/jjd/info.html

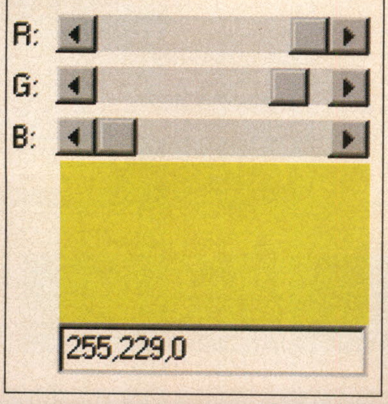
Loved by some, hated by others, it is clear that Java has become the language of choice for a generation of Webmasters. While other languages go in and out of fashion, good-old Java just keeps plodding along. It looks like it's going to become the Rolling Stones of computing.

But let us not forget about the users of early editions of Netscape or Explorer (version 3 and earlier), who have nightmares about visiting Java-heavy sites. Everyone knows what happens – your browser has an epileptic fit and in the worst cases it crashes your computer. Not funny.

But enough of the pros and cons of it all. What this site does is offer Webmasters the codes to create a range of Java applets. These include a diverse range of tool bars, pop-up menus and coloured links. All you do is cut and paste the code into the HTML of your site.

While not quite as large as the superb Java Centre (**http://www.java.co.uk**), all the goodies here are given away by the kindness of someone's heart – so don't knock it. Everyone who uses the Java is asked to put a tiny advert for Just Java Design, and commercial use is strictly prohibited. Anyone thinking of using this site should note – Java is good, but too much of a good thing can kill you.

Just Java
DESIGN



The Java
Centre

24 Seven

http://www.24seven.co.uk

In case you were wondering, 24 Seven makes deodorants for men. These particular deodorants work 24 hours a day, seven days a week – hence the name. It's a trendy type of company that has just re-vamped its Web site to match.

Targeted at the laddish end of the market, it is divided into categories including sport, music, stuff and life. It is lacking in pictures of naked female flesh, which you get with the sites of magazines such as *Loaded* (**http://www.uploaded.com**). Clearly this will disappoint some customers, but it comes as a pleasant change in our opinion.

The site is text heavy, but the information you get is well written. The sports section is put together particularly well – the pages about “Keeganisms” are especially amusing. This was created in honour of Kevin Keegan's tendency to make crap remarks while commenting on live matches.

Perhaps his finest moment was when he remarked how there was definitely only going to be one winner of the England versus Romania game, and that was England. It turned out to be a draw!

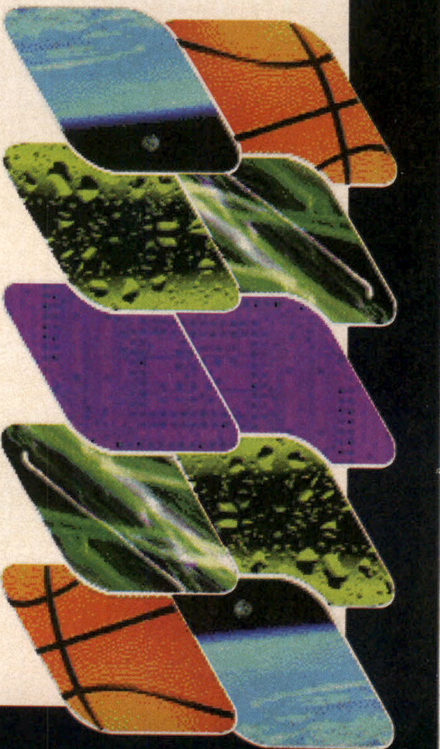
Users are invited to submit their own examples of blatantly crap and pointless pieces of commentary and punditry. It doesn't need to have come out of the mouth of Keegan (although an alarming number of those submitted were) nor from the world of football.

The music reviews are also very comprehensive. The gig guide is fully searchable by date and location. Full marks should go for 24 Seven for putting a genuinely useful site together which is thankfully low on blatant product marketing and corporate babble.

Search the
retroactivebaggage
Gig Guide

24seven

➳



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http://www.vodafone-retail.co.uk/

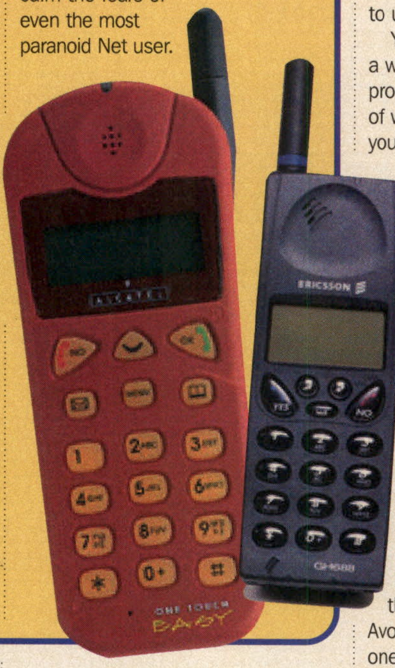
Dear Jim, please can you fix it for me to become a cyber hack? I want to be able to enter my articles into a laptop and I then want to be able to email it to my editor who may be located anywhere in the world. I want to take part in editorial meetings that are securely video conferenced over the Internet. Last but not least, I want to be able to perform all these duties as I drink Bacardi on a beach in the South of France. Yours, Steve, aged 24-and-a-half.

If I was to send this letter to Jimmy Saville 10 years ago, he would have jangled his jewellery a bit, and after taking a long puff of his cigar he would have said, "now then, now then, you're nearly as mad as me!" But technology has moved on and my ambition to become a cyber hack may turn into reality pretty soon. I can now contact my ISP from most cities in the world, and mobile phone operators are now offering 'near' international coverage.

Vodafone has been at the forefront of the revolution in mobile communications. This superb site gives you everything you need to know about phones, tariffs and line rental. It comes packaged in a very easy-to-digest format – very useful when comparing mobile phone operators. It explains all the terms, and gives good insights into all the new developments.

But where this site really excels is its online ordering facilities. You can choose the item you are looking for by either using the accessory search or by selecting the relevant product section. If you want to know more about a product and see a picture, you simply click on the information icon. If you wish to buy something you can select it and it will appear in the shopping basket, located at the top of the screen. You can click on the basket to view its content at any time, and proceed to checkout. Payment is via a secure credit card system, and your order is confirmed via email. This should calm the fears of even the most paranoid Net user.

SEAL OF APPROVAL
Practical Internet



Avon UK

http://www.uk.avon.com

Ding Dong! Avon calling! Though not at your door this time. You can now order Avon online, via this ultra-neat and tidy Web site. Clean, effective, friendly and easy to use: very Avon.

You can purchase a wide selection of products from the site, all of which are displayed for your delectation. Although choosing colours through Web browsers and computer monitors may not be quite as reliable as actually putting your lipstick on your hand – why the hand all the time, ladies? – there are colour selectors on the pages. You can also choose from Avon's range of skin care products and fragrances. As well as buying Avon products through the site, you can also find out how to sell them. So if you fancy becoming one of Avon's 160,000 UK Representatives, you can find all the information you need here. Avon is apparently Britain's number one direct selling company, and views itself as the perfect small business opportunity.

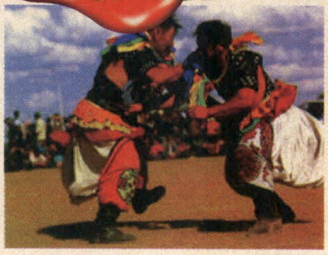
One minor point, though. Why isn't there a sound file that goes Ding Dong! as the page loads up? That would be cool.

AVON
scents of occasion
Don't miss Avon's latest incredible offers...

Chinatown Online

http://www.chinatown-online.com

Gerrard Street is the heart of London's Chinatown. Anyone who has ever walked down the West London street can't have failed to have been impressed by the smell of Chinese food, the allure of Chinese gifts or the incomprehensible Chinese movie theatres. Chinatown Online brings this experience to the Internet for the first time; with the virtual panoramic guides you can visit Chinatown without having to tackle London's smog or the maniacal taxi drivers.



Food is a major part of the site, with a useful menu translator – did you know that 'chop suey' is an Americanism for anything cooked with beansprouts as the main ingredient? – a recipe of the month and a guide to cooking Chinese food at home. There's even a restaurant and take away locator, but only for the London area.

But it's not just London's Chinatown that's represented here. You can also take a virtual trip to the real thing, with online travel information and tourist guides. It includes vital information such as visa requirements as well as an impressive gallery of pictures. Guaranteed to make you want to pack your bags and head east.

North West
North
Beijing
North East
Central
West
East
South West
South East

THE HORSE WHISPERER

The Horse Whisperer

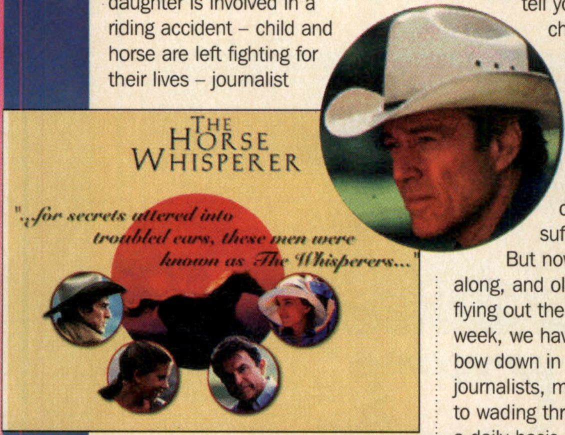
http://www.horsewhisperer.co.uk/

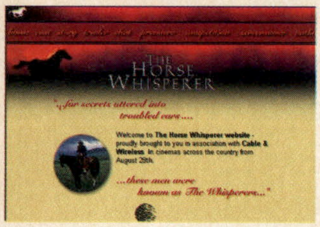
Judging by this summer's rather unspectacular and over-hyped movies, you may be thinking that things can't get any worse. However, you would be wrong. Plot-wise, *The Horse Whisperer* is only slightly more feasible than the 'let's save the entire world' plot of *Armageddon*. Hype-wise, nothing can match that of the appalling *Godzilla*, but *The Horse Whisper* is giving it a good shot.

It's based on the best-selling novel by Nicholas Evans and is directed by and stars Robert Redford. The plot runs along the lines of: New York journalist's daughter is involved in a riding accident – child and horse are left fighting for their lives – journalist decides that her daughter's health is inextricably linked to that of the horse! The journalist then goes in search of The Horse Whisperer, a sort of witch doctor for horses. It's all filmed in soft focus and there are plenty of tear-jerking scenes.

The reasons for creating this Web site are even more dubious than the film plot, if that's possible. "*The Horse Whisperer* is a story about people, relationships and communication-issues that many woman can identify with," reads the press release. It then goes on to explain that the site's creators are on a mission to encourage woman to use the Internet. The site is not, we repeat not, there just to promote the film.

We'll let you make up your own mind about the quality of this site, but if you are unsure whether to see the film or not you can download a trailer.


THE HORSE WHISPERER
"...for secrets uttered into troubled ears, these men were known as The Whisperers..."



"...for secrets uttered into troubled ears....

Welcome to **The Horse Whisperer website** - proudly brought to you in association with **Cable & Wireless**. In cinemas across the country from August 29th.

...these men were known as The Whisperers..."

Build to Order

Apple

Apple UK

http://www.apple.com/ukstore/

A Berlin Wall divides Macintosh and PC users. On one side, Mac fans will tell you how easy their choice of computer is to use and how it has better graphics handling capabilities. On the other side, PC proponents will say that they have a wider choice of software and suffer less crashes.

But now the iMac has come along, and old loyalties have gone flying out the Window. In the last week, we have witnessed PC fans bow down in praise of it. Hard-bitten journalists, many of whom are used to wading through hype on a daily basis, picked up their ears. In terms of street buzz, we haven't seen anything like it since the launch of Windows 95 and that was way back in... erm... 1995.

Why all the hype? Well for years Apple as a company was regarded by many as a dead duck. But it now seems to have come out of the shadows and may (for once) manage to make some waves in the PC market.

Selling for just under a grand, the price is most definitely right. It's also the first Mac to be fully Internet ready and packs a mean punch in the bundled software stakes.

To coincide with the launch, the UK branch of Apple has opened its doors for business on the Internet. The company's new online store allows customers to order software and products direct. It also offers the facility to create built-to-order configurations. So customers can pick processor speed, RAM, video memory, hard disk capacity, monitor size and many more features.

One point to note – make sure you remember the correct URL. I keep typing in **http://www.apple.co.uk** and this is, rather irritatingly, a site of a Web design agency.

UEFA

http://www.uefa.com

The popularity of football Web sites is continuing since the Official France 98 World Cup (**http://www.france98.com**) site announced that it received over one billion hits during the event. 58 million of these came in one day!

It is clear that a well-designed football site can prove really useful and so we are not going to slate UEFA for hopping on the bandwagon. It was launched to coincide with the Super Cup final between Real Madrid and Chelsea FC and the first-round draws of the 1998/99 club competitions.

UEFA would probably describe the site as being "information-rich." This means that there are fewer pretty pictures than you get with the FA Premiership (**http://www.fa-carling.com/**) site, or even on the Official World Cup site.

The site offers up-to-the-minute, in-depth analysis and data on Europe's clubs and teams. Where it really excels is in the section called In The Net. This is where things get all interactive as users can watch highlights of every UEFA Champions League match (broadcast the morning after each game), and there are also highlights of the best goal action. Chat sessions with football personalities will also take place and users can take part in online quizzes and vote in opinion polls.

UEFA estimate that it will receive half a million visitors a day. We personally think that will prove to be a very conservative estimate.

The official Web Site www.uefa.com
in the Net

SCHWARTZ
Herbes de Provence
REFILL

Schwartz

http://www.schwartz.co.uk

Mention herbs to your average university student and you'll probably be asked how much it costs for an eighth. But they would have a few problems smoking the stuff that Schwartz sells. If they did, they may get some interesting results.

In case you are wondering, Schwartz are the people that make herbs and spices that come in those small jars you probably have in your kitchen. Nobody ever seems to use them, but they do look good to have around.

The most exciting thing about this company is the huge range of different types of herbs that it sells. Believe it or not, there are no less than seven forms of garlic. Presumably, each producing a slightly different type of halitosis.

The recipes section is the most useful area, and gives you a choice from simple and delicious barbecue marinades to Indian dishes that use a wide range of individual spices. Speaking as a person who 'can't cook' and 'won't cook,' I found it most informative.

If you want to impress your mates with your trivia, you can discover which spice the Babylonians recommend for making brandy, what spices stimulate the appetite and what the world's most popular spice is. Not a bad site, just a shame about the design and layout.

SCHWARTZ
Whole Cloves
SCHWARTZ
Whole Nutmegs

SEAL OF APPROVAL
Practical Internet

Wall's Sausages

http://www.bangers.co.uk

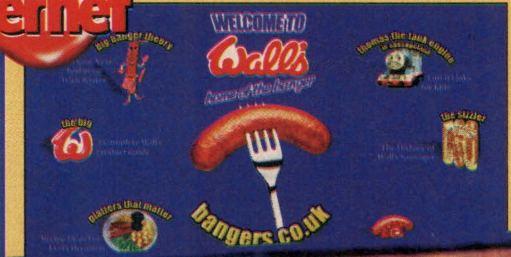
Before you even think about looking at this site, you'll need to check that you are using version 3 or newer of either Netscape or Explorer, and that it is kitted out with the Shockwave Flash plug-in. It only takes a couple of minutes to download from **http://www.macromedia.com**.

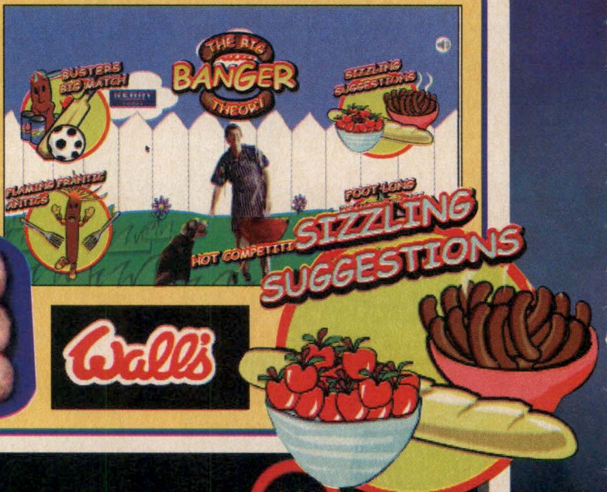
Done it? Well, now you can sit back and relax because you are in for an audio and visual treat.

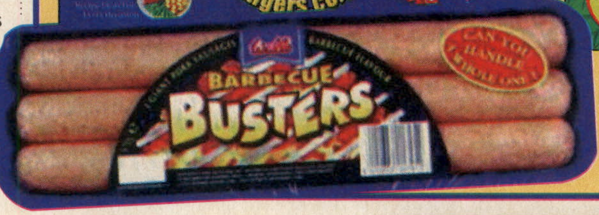
Aimed at a family audience, this site has a bit of something for everyone. For the kids, there are plenty of fun and games. For budding chefs, there are a range of recipes for all occasions in a section called Platters That Matter. The Sizzler contains the history of the Wall's sausage. The Sauasagegram is an attempt by Walls to obtain some free market research. To thank you for taking the time to fill in the form they give you a 20p discount – great! Predictably, there is also a complete listings of all Wall's sausage products including prices and where to buy the goods.

All this is really run-of-the-mill corporate trash which we have all got very used to looking at. The real meat is to be found in a section called The Big Banger Theory. This uses Flash to produce some superb sound and animation and includes a comprehensive sporting events calendar listings and the excellent Foot Long Weather Forecast. This will prove useful for planning when to have a barbecue in the garden. Some would say that this site is a triumph of marketing over content. They could be right, but what the hell. If you visit just one corporate Web site this year make sure it is this one. You'll probably only look at it once, but it's well worth it.

BUSTERS BIG MATCH
THE BIG BANGER THEORY





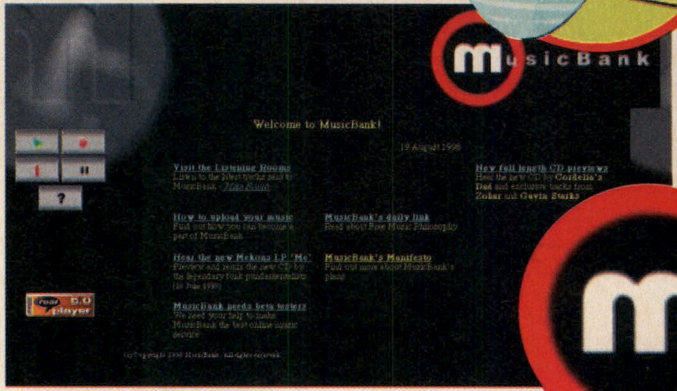


MusicBank

http://www.musicbank.net/

Are you fed up with hearing the same old groups churning out the same tired cover versions on Radio One and *Top of the Pops*? If so, you may well want to check out the MusicBank. This site is dedicated to new music, and it allows artists to publish, promote and distribute their music on the Internet. You can even upload your own music to the site and become part of the MusicBank experience, or you could decide to become a beta tester, and help make the site even better.

MusicBank is very much an on-going project, and aims to become an online depository of dance and experimental music, or any other genre that takes your fancy. Although it's just been launched, there's plenty to keep you occupied. For starters, you can listen to the latest album by seminal punk bank the Mekons. Not only can you listen to it, but you are invited by the band to sample it, remix it, or do anything you want with it. Just make sure you upload the results back onto the MusicBank site for everyone to hear.



Welcome to MusicBank!

19 August 1998

Visit the Listening Rooms

How to upload your music

MusicBank's daily link

Hear the new Mekons LP 'Me'

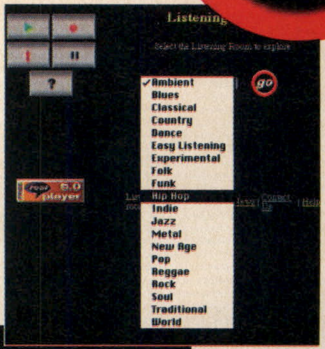
MusicBank's Manifesto

MusicBank needs beta testers

New full length CD previews
Hear the new CD by Cordelia's Dad and exclusive tracks from Zohar and Gavin Starks

MusicBank
?
real 5.0 player

Listening Rooms
dance



✓Ambient
Blues
Classical
Country
Dance
Easy Listening
Experimental
Folk
Funk
Hip Hop
Indie
Jazz
Metal
New Age
Pop
Reggae
Rock
Soul
Traditional
World

mekons
New CD "Me" can be previewed and interfered with on the internet

FREE real 5.0 player

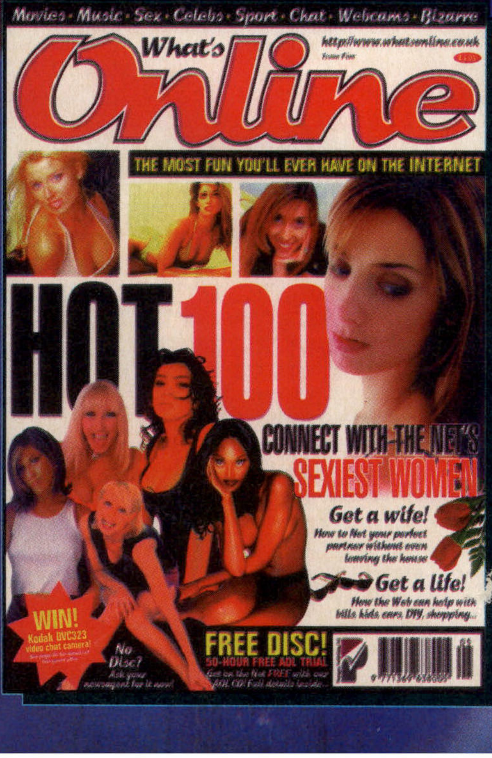
The most fun you'll ever have on the Net

What's Online

http://www.whatsonline.co.uk

Each issue we bring you:

- The most exciting places to visit online. Hand-picked Web sites, celebrity chat, newsgroups and mailing lists
- Features on the most exciting aspects of the Net, written in jargon-free English
- Beginner-friendly survival guides to help you get the most from your Internet connection
- News, gossip, competitions and more!



Movies · Music · Sex · Celebs · Sport · Chat · Webcams · Bizarre

What's Online

http://www.whatsonline.co.uk

THE MOST FUN YOU'LL EVER HAVE ON THE INTERNET

HOT 100

CONNECT WITH THE NET'S SEXIEST WOMEN

Get a wife!
How to Net your perfect partner without even leaving the house

Get a life!
How the Web can help with bills, kids, cars, DIY, shopping...

WIN!
Kodak DVC323 video chat camera!

No Disc?
Ask your newsagent for it now!

FREE DISC!
50-HOUR FREE AOL TRIAL

ADMIT ONE
4260003
What's Online
ADMIT ONE
4260002

Issue 5 on sale now!

BRIEF ENCO

BURNING RUBBER

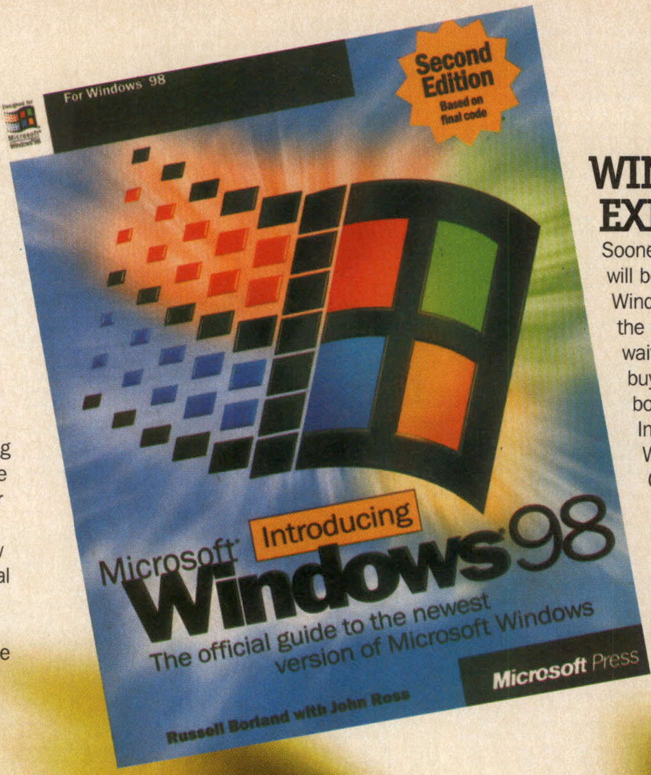
You don't need to be the best driver in the world to take on Colin McRae. In fact you don't even need a car any more, thanks to this excellent new racing game from Codemasters. Now you too can experience the excitement of top-class rally driving with Colin McRae Rally.

The game allows you to race over 48 stages in 12 world class rally cars. The gorgeous graphics really give you the impression of speed as you spin out around those tight, muddy corners. Once your times are looking good, you can post them on the official Web site to see how you stand up against the competition from all over the world.

The Web site – **http://www.colinmcrae.com** – is now operational and accepting those fastest times. A special code-based validation system makes it impossible for people to cheat – not that you would, of course.

Unfortunately, the game itself is not playable over the Internet. A shame really, as the idea of a massed Net rally championship is quite an exciting one.

Product:	Colin McRae Rally
Platform:	Windows 95/98
Price:	£29.99
Contact:	http://www.colinmcrae.com


For Windows 98
Second Edition
Based on final code
Microsoft Introducing Windows 98
The official guide to the newest version of Microsoft Windows
Microsoft Press
Russell Borland with John Ross

WINDOWS EXPLORER

Sooner or later the majority of us will be looking to update to Windows 98 – either by buying the new software on its own, or waiting until the next time we buy a PC. When you do, this book could prove invaluable. Introducing Microsoft Windows 98: The Official Guide to the Newest Version of Microsoft Windows, is a great book detailing all the little differences and improvements that make Win 98 stand apart from its 95 predecessor. Internet users will be

COMPLETE CONTROL

After reading the NetGamer section of *Practical Internet* you might be in the mood for a spot of serious gameplay. Well, if you're bored with the mouse and keyboard approach to killing, racing and tactical manoeuvring, perhaps you should try the game pad approach – if it works for several million console users, there's no reason it shouldn't transfer to the PC.

The clear Premier Pad is great value for money. Developer Wild Things is confident that the pad's quality, coupled with its £10 price tag, makes it the ideal choice for PC gamers.

Product:	Premier Pad
Platform:	Windows PC
Price:	£9.99
Contact:	http://www.Wild-Things.co.uk

RAVE ON!

You, like us, must have gone to a club or a gig before now and come away thinking, "I could do that!" Well, now's your chance – and you don't even have to know how to play a musical instrument. In fact, you don't even have to know how to DJ. All you need is a copy of Rave eJay, and an ear for a great tune.

The drop-dead simple drag-and-drop interface allows you to create some truly startling sounds – and quickly correct any embarrassingly poor errors of judgement you inflict on the ears of the people around you. The eight-track studio has more than enough depth for most part-time music makers

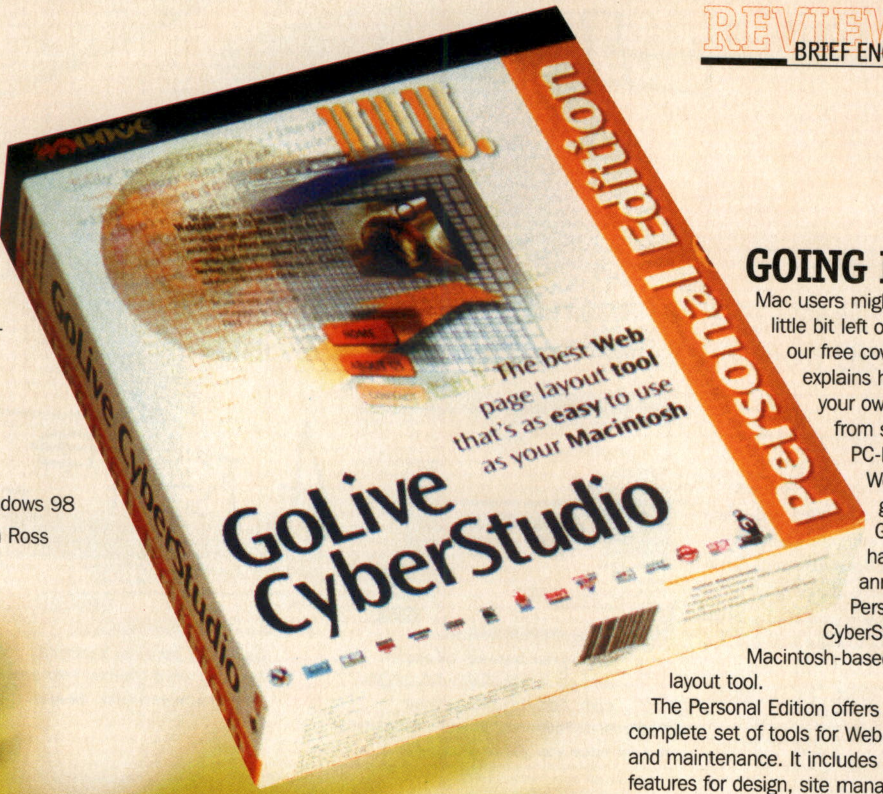
Following on from the success of Dance eJay, this fantastic program allows you to make your own brand of techno, with an ear-shattering collection of drum beats, samples, bass lines and other effects. There are over 1,000 original samples for you to play with, and even more on the Web site, at **http://www.fasttrak.co.uk**. And with the built in Hyper Generator you can spend the rest of your disco days creating sounds of your own.

UNTERS

especially interested in the now even more integrated Explorer package, and how it can make using both their computer and the Internet more interesting and rewarding.

Although this book is useful for people upgrading, it also provides a great resource for individuals who are buying their first PC and are completely new to the Windows environment. Easy-to-understand tutorials and clear graphics make it a great reference. It should be kept at your side for whenever those inevitable Windows problems rear their ugly little heads.

Product:	Introducing Microsoft Windows 98
Authors:	Russell Borland with John Ross
Publisher:	Microsoft Press
Price:	£22.99


GoLive CyberStudio
Personal Edition
The best Web page layout tool that's as easy to use as your Macintosh

GOING LIVE

Mac users might be feeling a little bit left out after reading our free cover book, which explains how to build your own Web site from scratch using a PC-based program. Well, here's the good news: GoLive Systems has just announced a Personal Edition of CyberStudio, its Macintosh-based Web page layout tool.

The Personal Edition offers users a complete set of tools for Web design, layout and maintenance. It includes powerful features for design, site management, HTML source code and JavaScript editing. Yet even with all of this, GoLive claims that CyberStudio is as easy to use as your Macintosh is.

Even though the Personal Edition is a cut-down version of GoLive's CyberStudio 3 Professional Edition, the price – at around £100 – makes it well worth considering. Especially as you can easily upgrade to its bigger brother for around £150. Try out the 30-day trial version first, available for download at **http://www.golive.com**.

Product:	GoLive CyberStudio Personal Edition
Platform:	Power Mac
Price:	£99
Contact:	http://www.golive.com

Rave eJay
FastTrak
PXD
Enter The World Of The Underground!
ing: Seriously Addictive
Rave eJay

Product:	Rave eJay
Platform:	Windows 95/98
Price:	£29.99
Contact:	http://www.fasttrak.co.uk

IT AIN'T PC

According to the authors of Politically Incorrect Jokes From the Net, they trawled the Internet for an age compiling this collection of supposedly outrageous jokes.

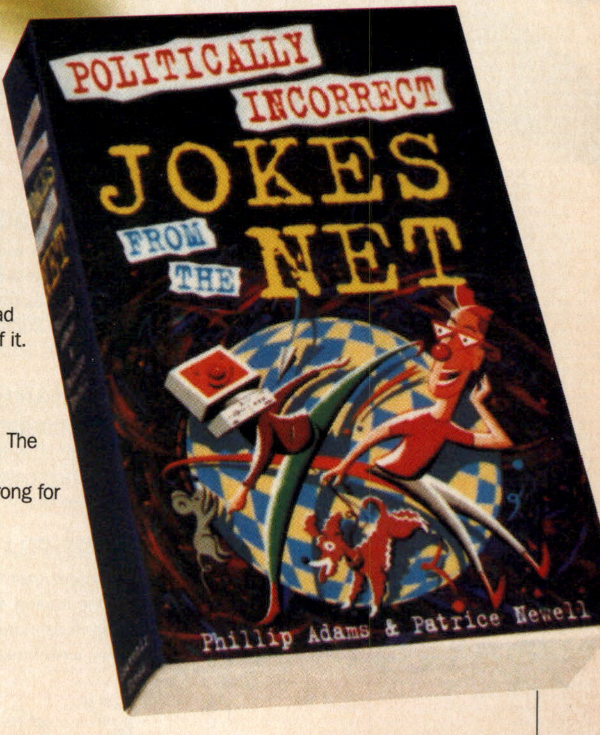
We must admit to being a little bit disappointed with the content at first, but that was only because we were in work mode, and therefore expected the jokes to be about the Internet. But once we had established that the only real link to the Net was that these jokes had been found there, we soon got into the swing of it. Here's a (printable) sample.

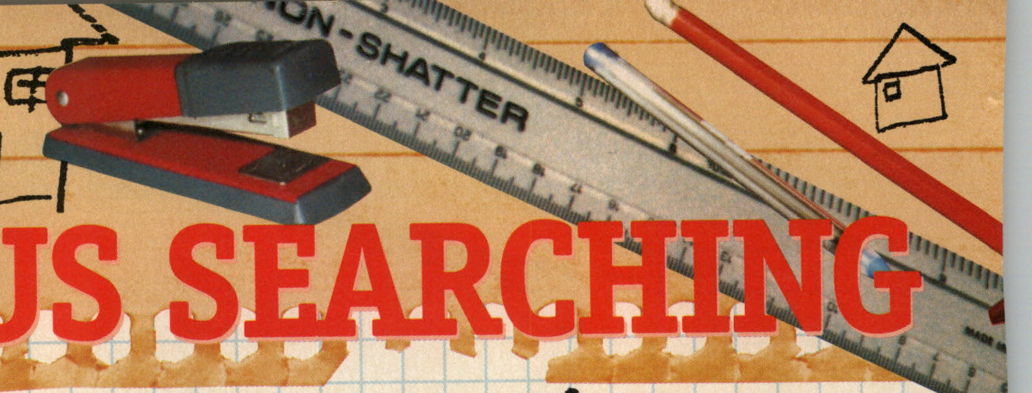
Q: What's the difference between *Jurassic Park* and IBM?

A: One's a theme park dominated by dinosaurs. The other's a Steven Spielberg film.

The vast majority of the other jokes were too strong for our family audience, by the way.

Product:	Politically Incorrect Jokes From the Net
Authors:	Phillip Adams & Patrice Newel
Publisher:	Souvenir Press
Price:	£8.99


POLITICALLY INCORRECT JOKES FROM THE NET
Phillip Adams & Patrice Newell



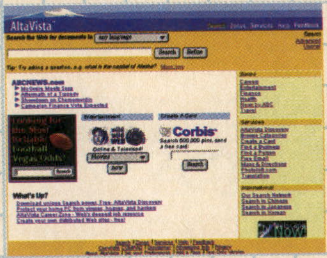
SERIOUS SEARCHING

Enter the learning zone again, as **PAUL DOUGLAS** *shows how to get more from the powerful AltaVista search engine*

Believe it or not, there's a lot more to using a search engine than simply typing 'games' into the search box. An approach like that will give you thousands of results, often of little relevance. To save time – and therefore money – you really need to get to grips with the more advanced search options many search engines offer. We've opted to use AltaVista for this lesson, because it's a heavy-duty searcher and a lot of people won't be getting the best out of it.

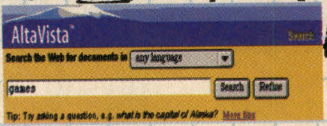
Correction

GO to the back of the class, James Seabright, who last month said that eMobile's gateway charges started at £15 per month. This should have read £15 per year. Full pricing details are at http://eMobile.co.uk/page9.html.


AltaVista
Search
Refine

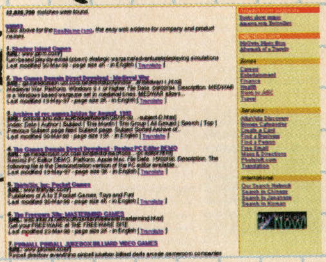
1 *Open your browser of choice and go to http://altavista.digital.com. Add this site to your Bookmarks/Favorites as you'll be using it a lot once you get to grips with it*

A B


AltaVista
Search the Web for documents in any language
Search
Refine

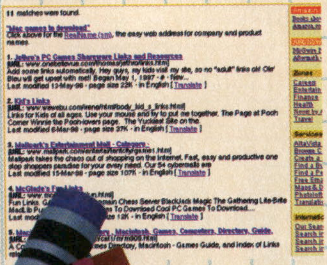
games

2 *Using our previous example, type the word 'games' into the search box and click 'Search'*



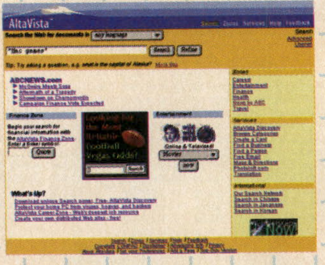
12,826,790 matches were found.

3 *Oh dear. We've found 12,826,790 matches, which would take rather a long time to sift through*



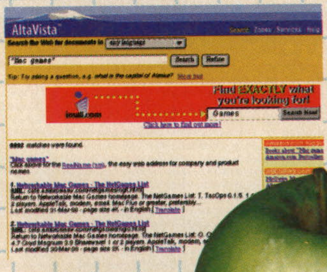
11 matches were found.

6 *And now we've got much closer to some useful results. We're down to just 11 entries, and these are highly accurate*


AltaVista
Search
Refine

"Mac games"

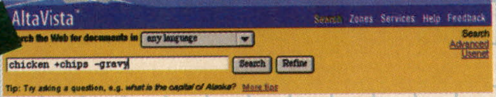
7 *Let's take another example, and another way to tighten up the results returned to you. Go back to the main page, http://altavista.digital.com, and enter "Mac games" (with the quotes) into the search box before clicking 'Search'*


AltaVista
Search
Refine
Find EXACTLY what you're looking for!

"Mac games"

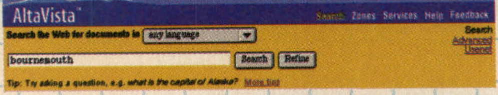
8 *We've got over 9,000 results, so click the 'Refine' button next to the 'Search' button at the top of the page*

CRAYONS
CRAYONS
CRAYONS
CRAYONS


AltaVista
Search Zones Services Help Feedback
Search the Web for documents in any language
Search
Refine
Tip: Try asking a question, e.g. what is the capital of Alaska?

chicken +chips -gravy

11 *Another tip worth remembering is that you can put a plus symbol before words that are required, and a minus symbol before words you don't want*


AltaVista
Search Zones Services Help Feedback
Search the Web for documents in any language
Search
Refine
Tip: Try asking a question, e.g. what is the capital of Alaska?

bournemouth

12 *If in doubt, use lowercase text in your searches. When you use lowercase text, the search finds both upper and lowercase results*

Getting more advanced

ALTAVISTA also has some more advanced functions worth trying out. Here are some of them:

ANCHOR:TEXT

Finds pages that contain the specified word or phrase in the text of a hyperlink. So, entering anchor:"Click here to download free games" would find pages with "Click here to download free games" as a link.

APPLET:CLASS

This finds pages that contain a specified Java applet. Entering applet:crossword will find pages using applets called crossword.

DOMAIN:DOMAINNAME

This function will find pages within the specified domain. Use domain:uk to find pages from the UK, or use domain:org to find pages from organisations.

HOST:NAME

This finds pages on a specific computer. The search host:paragon.co.uk would find pages on the paragon.co.uk server.

IMAGE:FILENAME

A function that finds pages with images having a specific filename. Using image:baseball will find pages with images called baseball.

LINK:URL

Finds pages with a link to a page with the specified URL. For example, use link:paragon.co.uk to find pages linking to Paragon. Try it with your own home page URL.

TEXT:TEXT

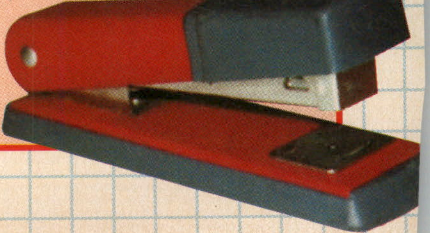
This finds pages that contain your specified text in any part of the page other than an image tag, link, or URL. Searching for text:chocolate will find pages with the word chocolate in them.

TITLE:TEXT

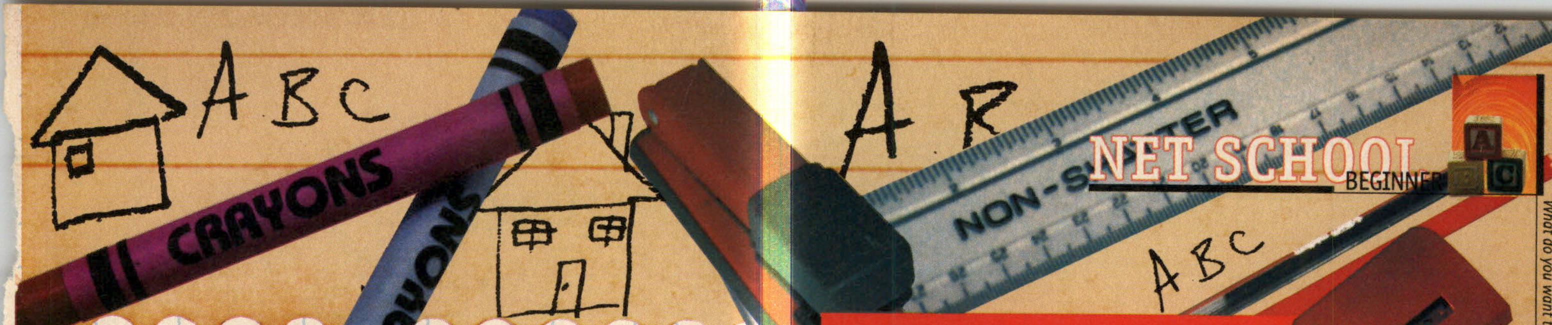
This finds pages that contain the specified word or phrase in the page title, which appears in the title bar of your browser. The search title:Shareware will find pages that have Shareware in the title.

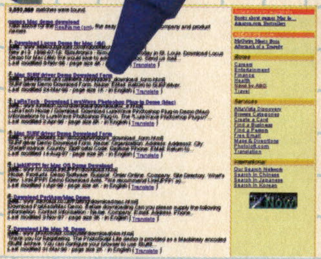
URL:TEXT

This finds pages with a certain word or phrase in the URL. So, use url:microsoft to find pages (on all servers) that have the word microsoft anywhere in the URL.

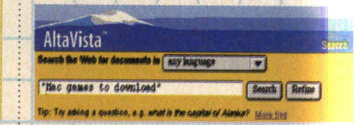


A B C





4 *We should have specified more search terms. For example, 'games Mac demo download' gives us 3,553,960 matches. That's a lot less, but still too many*

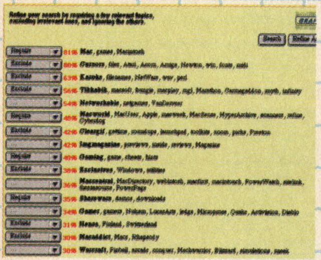


Search the Web for documents in: any language

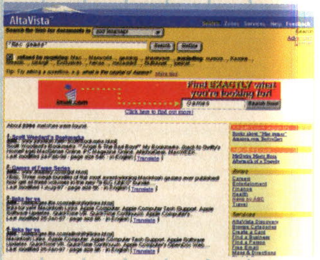
"Mac games to download"

Tip: Try asking a question, e.g. what is the capital of Alaska? More tips

5 *So now form a phrase, by thinking more carefully about what you want, and surround it with double quote marks like so: "Mac games to download"*



9 *This page allows us to require and exclude certain words from the pages we're are searching for. Once you've done that, click 'Search' again*



10 *We've cut the results down to a couple of thousand now and, as is the case with most search engines, these are sorted into order of relevance*

Boolean operators

YOU can further refine your searches by using the Boolean operators, of OR, NOT, AND, NEAR commands in the Boolean Operator section below AltaVista's Advanced search box. You can also add start and end dates for the pages your are seeking. Here's a quick guide to the operators:

AND

This finds pages containing all of the specified words or phrases. Software AND free will find pages containing both the word software and the word free.

OR

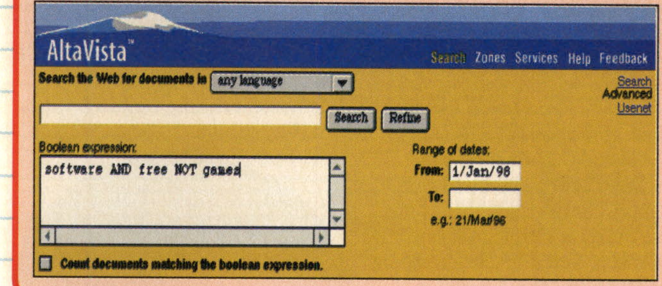
This finds pages containing at least one of the specified words or phrases. Software OR free finds documents containing either Software or free. The found documents may contain both, but they don't have to.

NOT

This excludes documents containing the stated word or phrase. Software AND NOT free finds documents with software but not containing free. NOT must be used with another operator, such as AND.

NEAR

This command will find pages that contain both words or phrases within 10 words of each other.



Search the Web for documents in: any language

Boolean expression: software AND free NOT games

Range of dates:
From: 1/Jan/98
To:
e.g.: 21/Mar/96

☐ Count documents matching the boolean expression.

Other searchers

ALL-IN-ONE

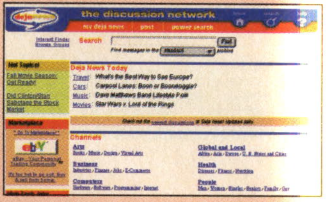
http://www.albany.net/allinone

Tons of search engines are accessible from this excellent collection of Web pages.

DEJANEWS

http://www.dejanews.com

Simply the best way to search for news postings that have been made to Usenet.



HOTBOT

http://www.hotbot.com

Very easy to use, HotBot indexes a huge amount of Web pages and is as useful as AltaVista.

METACRAWLER

http://www1.metacrawler.com

Metacrawler puts your search query through a host of different search engines.

AUTO INSURANCE
IT'S FREE!
metacrawler
PLAYSITE Play Now!

ASK JEEVES

http://www.askjeeves.com

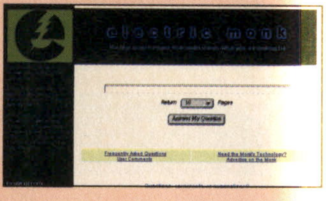
Frame your search query as a question, for example, what is the capital of Brazil? An ideal search engine for beginners.

ASK JEEVES!
AJ.com

THE ELECTRIC MONK

http://www.electricmonk.com

Another searcher that lets you enter a question rather than a strong of words. This one is powered by Lycos.



LYCOS

http://www.lycos.com

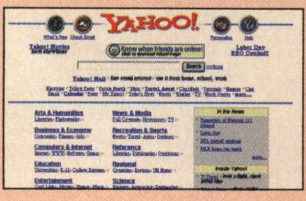
Lycos is a fairly standard search engine but it has a very good picture searching facility.

LYCOS
THE OTHER YOU CAN'T SEE
Find

YAHOO!

http://www.yahoo.com

Not a search engine, but a hierarchical directory of Web sites. Particularly useful if you want to browse sites by category.

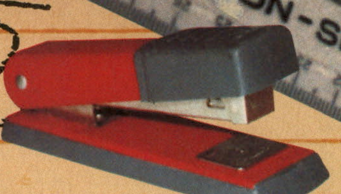


What do you want to learn? Email us at pi@paragon.co.uk and tell us what you're having problems with. Whether it's setting up email address books or coding Java applets, we'll do our very best to cover it

23114O

33
14|462

NET SCHOOL
INTERMEDIATE



IT'S ON OUR COVER CD!

WEBWEAVING FOR MAC

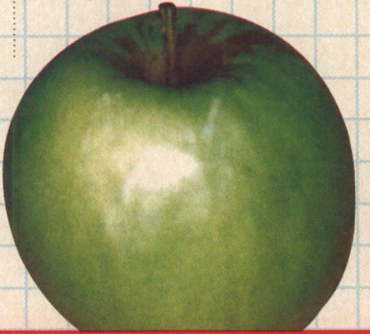
Creating Web pages on a Mac is easy with PageSpinner, a shareware HTML-editing package. **CLIVE PARKER** *explains*

Product:	PageSpinner 2.0.1
Platform:	Apple Macintosh
Price:	Shareware $20.00
Contact:	http://www.optima-system.com/pagespinner/

Although there are quite a few expensive, professional HTML editors for the Macintosh, one of the best is a shareware program called PageSpinner. PageSpinner supports all HTML 2.0 tags and the majority of HTML 3.2 tags plus additional Netscape extensions and plug-ins. This makes PageSpinner useful both for beginners and more advanced Web page authors. The program gives you quick access to page formatting options you use most often, it supports AppleGuide, and includes its own HTML Assistant utility that helps you compose your pages. The editor also makes it simple to change the look of a complete site by editing a single page. PageSpinner is scriptable with AppleScript. This makes it possible to use a script-driven approach to creating and updating a Web site. Several demo scripts are included with PageSpinner that automate tasks and can be used for publishing data from popular database applications. PageSpinner's support for extension plug-ins enables you to download new or updated menus and examples from the Net without upgrading the complete program. PageSpinner also includes support for the latest Web technologies such as embedded objects, frames, cascading style sheets, the autoloading of HTML files, Java and JavaScript.

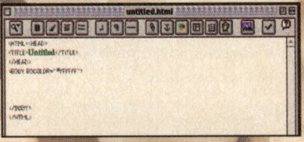
10
26
0

For this tutorial we're not going to be creating anything too complicated, just a basic page with images and links to other sites, demonstrating the various features of the program.

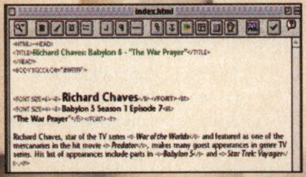


GETTING STARTED

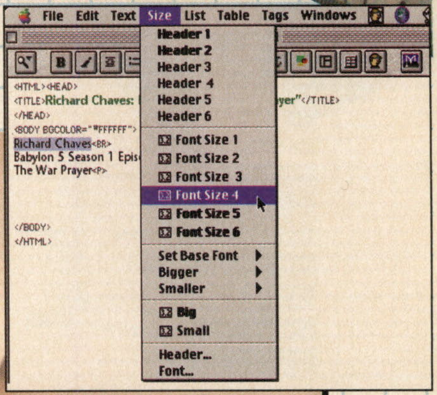
Creating a basic page is simple with PageSpinner. Use the 'New Empty Page' command in the File menu and a page is created with the basic tags needed to build a page. These are the <HTML>, <HTML>, <HEAD> and <BODY> tags.



1 *When you use the New Empty Page command in the File menu, PageSpinner creates a new page containing the basic <HTML>, <HEAD> and <BODY> tags for you to get started*



2 *Type the name of the page between the <TITLE> tags and save to disk. PageSpinner works out where image files are in relation to where your page is stored*

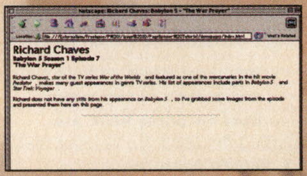


```
<HTML><HEAD>
<TITLE>Richard Chaves:                  yer"</TITLE>
</HEAD>
<BODY BGCOLOR="#FFFFFF">
Richard Chaves<BR>
Babylon 5 Season 1 Epis
The War Prayer<P>



</BODY>
</HTML>
```

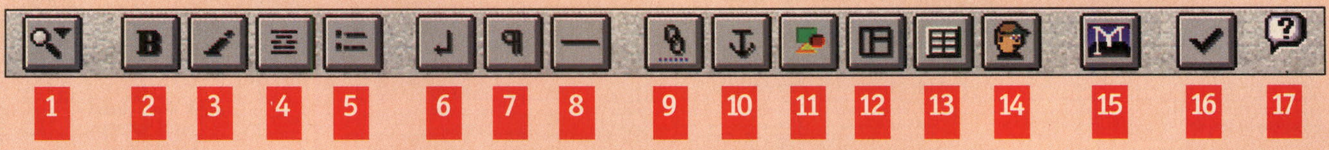
3 *At this point you should type in your intro text. Use the Size menu to create different font sizes for your headings. You can use the <HEADER> tags or the <FONT SIZE> tags for your headings, although the <FONT SIZE> tag gives you greater control. Your body text should be set to size 2 for best results in Web browsers. Add a horizontal rule after the intro text and before your first image*



4 *This is what the page looks like in Netscape Communicator 4.5 after the first stage*

The PageSpinner toolbar

AT the top of every PageSpinner page there is a useful toolbar. By clicking on the buttons you can perform actions on highlighted text or insert objects into the page at the cursor position.



1 **FIND:** A pop-up menu that enables you to find specific text or tags in a document.

2 **BOLD:** Click on this to make selected areas of text bold.

3 **ITALICS:** Click on this to italicise selected areas of text.

4 **CENTER:** Click on this button to centre the selected areas of the page.

5 **LIST:** Create a list in your document.

6 **LINE BREAK:** Force a line break in your text.

7 **PARAGRAPH BREAK:** Create a paragraph break in your document.

8 **HORIZONTAL RULE:** Insert a horizontal rule into your page.

9 **LINK:** Create a link to another HTML page.

10 **ANCHOR:** Create a link to a named anchor within a Web page.

11 **IMAGE:** Insert an image into the Web page.

12 **FRAMES:** Create a frameset in your Web page.

13 **TABLES:** Create tables within your Web page.

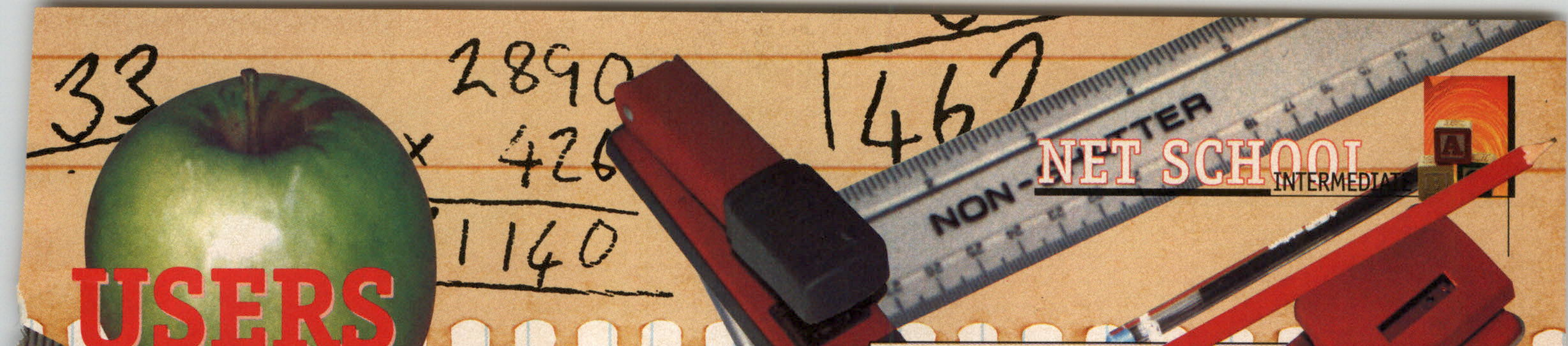
14 **HTML ASSISTANT:** Open the HTML Assistant tool.

15 **PREVIEW:** Preview the page in your chosen Web browser.

16 **RESTYLE:** Restyles the document tags and text.

17 **BALLOON HELP:** Switches Balloon Help on and off.

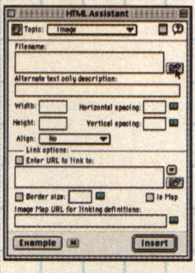
28
× 4


33
2890
× 426
1140
462
NON-SCATTER

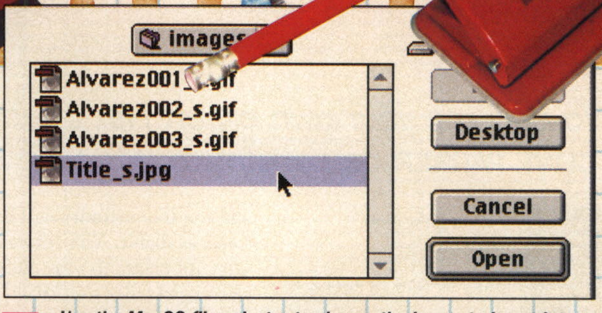
ADDING IMAGES

PageSpinner makes it very easy to add images to your Web pages.

Click at the position in the page where you want your image to appear, then click on the 'Image' button in the toolbar and wait for the HTML Assistant tool to open.


HTML Assistant
Topic: Image
Filename:
Alternate text only description:
Width:
Height:
Horizontal spacing:
Vertical spacing:
Align: No
Link options:
Enter URL to link to:
Border size:
Is Map
Image Map URL for linking definitions:
Example
Insert

5 *When the HTML Assistant opens, it should be set to the Image topic in the pop-up menu at the top of the window. Click on the folder icon to the right of the 'Filename:' box to choose the image you want to insert*



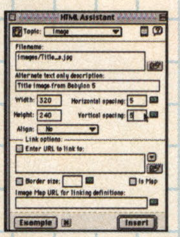
images

Alvarez001_s.gif
Alvarez002_s.gif
Alvarez003_s.gif
Title_s.jpg

Desktop
Cancel
Open

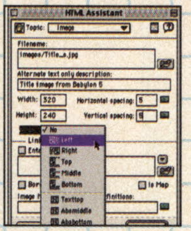
12.

6 *Use the MacOS file selector to choose the image to insert into your page. It's good practice to keep image files in a folder called 'images' so you can easily find graphics*

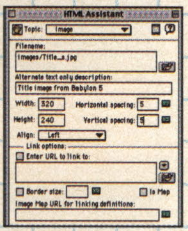


Filename: images/Title_s.jpg
Alternate text only description: Title image from Babylon 5
Width: 320 Horizontal spacing: 5
Height: 240 Vertical spacing: 5
Align: No

7 *The path name for the image file is inserted into the 'Filename:' box. Type in a description of the image in the description box so browsers with images switched off can see what it is. It's a good idea to have some space around an image – insert a pixel value in the Horizontal and Vertical spacing boxes*

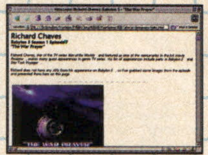

No
Left
Right
Top
Middle
Bottom
Texttop
Absmiddle
Absbottom

8 *You can line up your picture to the left or the right of the screen using the 'Align:' pop-up menu. This is up to you*



Filename: images/Title_s.jpg
Alternate text only description: Title image from Babylon 5
Width: 320 Horizontal spacing: 5
Height: 240 Vertical spacing: 5
Align: Left

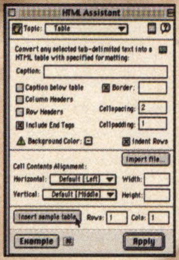
9 *All you have to do now is click on the 'Insert' button to place the HTML code for the image into your Web page*



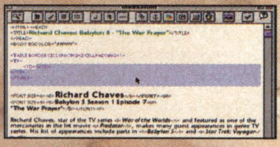
10 *Here's how the page looks with the image added*

SETTING THE TABLE

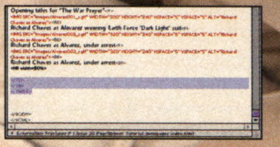
Some Web pages stretch right across the screen, and don't look the same in every browser. It's a good idea to limit the width of the display by placing the entire contents inside a table. To make sure the formatting will be the same for everyone, specify the font size.


HTML Assistant
Topic: Table
Convert any selected tab-delimited text into a HTML table with specified formatting:
Caption:
Caption below table
Column Headers
Row Headers
Include End Tags
Background Color:
Border:
Cellspacing: 2
Cellpadding: 1
Indent Rows
Import file...
Cell Contents Alignment:
Horizontal: Default (Left)
Vertical: Default (Middle)
Width:
Height:
Insert sample table
Rows: 1
Cols: 1
Example
Apply

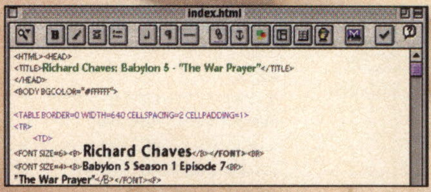
11 *Place the cursor into your Web page after the <BODY> tag but before the content of your page, then click on the 'Table' icon in the PageSpinner toolbar. Near the bottom of the HTML Assistant, enter the value 1 in the Rows and Cols boxes, then click on the 'Insert sample table' button*



12 *Delete the text between the <TD> and </TD> tags, and highlight </TD></TR> and </TABLE>. Use the Cut command to cut the tags*



13 *With the cursor between the end of the body code and the </BODY> tag, use 'Paste' to put the tags into the page, then save*

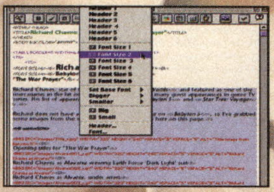


index.html

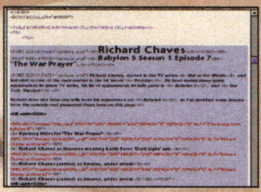
```
<HTML><HEAD>
<TITLE>Richard Chaves: Babylon 5 - "The War Prayer"</TITLE>
</HEAD>
<BODY BGCOLOR="#FFFFFF">

<TABLE BORDER=0 WIDTH=640 CELLSPACING=2 CELLPADDING=1>
<TR>
    <TD>
<FONT SIZE=6><B>Richard Chaves</B></FONT><BR>
<FONT SIZE=4><B>Babylon 5 Season 1 Episode 7<BR>
"The War Prayer"</B></FONT><P>
```

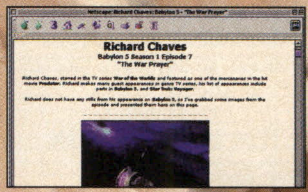
14 *Now to set the width of the table. Go to the <TABLE> tag at the top of the page and add the following parameter to the tag: WIDTH=640. This will limit the width of the table to 640 pixels. To hide the table, change the BORDER parameter to BORDER=0*



15 *Select all of the text after the headings and select Font Size 2 command from the Size menu. Use bold or italics to emphasise important words and phrases*



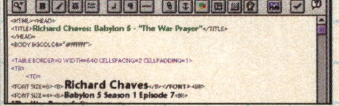
16 *To make everything neat and tidy, highlight all of the HTML code between the <TD> and </TD> tags and click on the Center button in the toolbar*



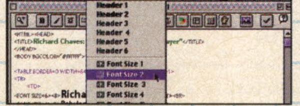
17 *To correctly format your page, add the following to the <FONT SIZE=x> tags (where x is the font size): <FONT SIZE=x FACE="verdana,arial">. The browser will use the Verdana font.*

CREATING CUSTOM TAGS

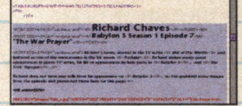
One of the big advantages of PageSpinner is that you can add your own custom tags to the program. This means that you can add new HTML 4 or your own personal tags enabling you to create pages that are completely up-to-date.



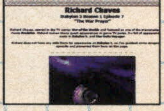
18 *Press and hold the ALT key, go to the Tags menu and select User Tags command, then select an undefined user tag from the submenu*


File Edit Text Size List Table Tags Windows Help
Header 1
Header 2
Header 3
Header 4
Header 5
Header 6
Font Size 1
Font Size 2
Font Size 3
Font Size 4

19 *Give the tag a title, then create your start and end tags. This example creates a tag to set font size 2. Click 'OK'*



20 *From the Tags menu, select User Tags then your new tag from the submenu*



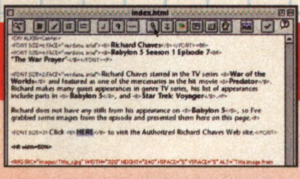
21 *Your new tag is put into the HTML code just like any other tag*

Network charges

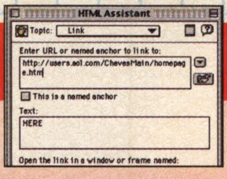
You will want to link to other pages both on and off your Web site. Follow these steps to create links using the HTML Assistant in PageSpinner.

9

26

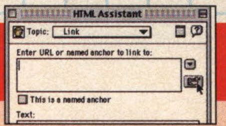


1 *Highlight the text or image you want to use as the link to a new page, then click on the 'Link' button in the toolbar*

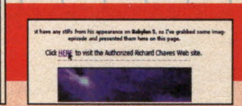


Topic: Link
Enter URL or named anchor to link to: http://users.aol.com/ChavesMain/homepage.htm
☐ This is a named anchor
Text: HERE
Open the link in a window or frame named:

2 *If you are linking to a page on a remote Web site, type in the URL and click on 'Apply.'*

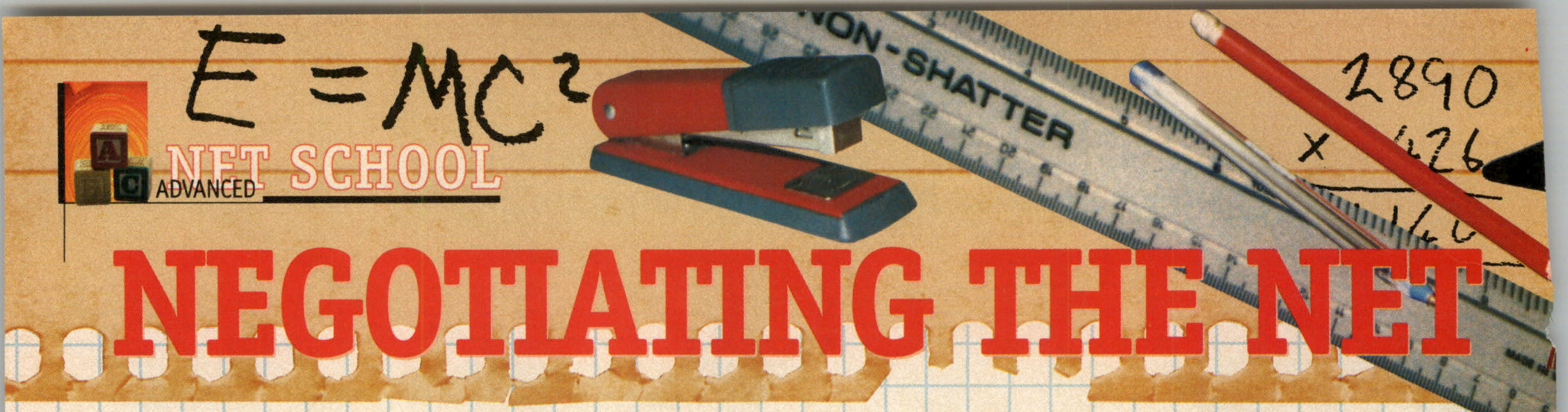

HTML Assistant
Topic: Link
Enter URL or named anchor to link to:
This is a named anchor
Text:

3 *To link to a page on your site, click the folder icon and select a page using the file selector. Then click the 'Apply' button*



4 *The link now appears in your new Web page as blue underlined text. Simple really*

33



NEGOTIATING THE NET

To become your own expert Net troubleshooter you need the tools of the trade. **CLIVE PARKER** *demonstrates WS_Ping ProPack, which offers a clutch of Net utilities*

Product:	WS_Ping ProPack
Price:	£28 incl. VAT
Contact:	Unipalm. 01638 569 600
Web:	http://www.unipalm.co.uk

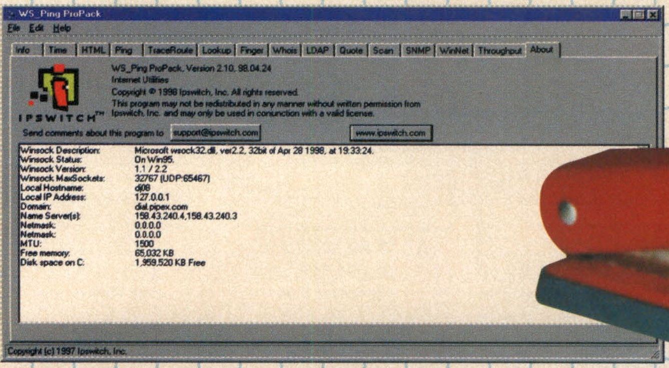
The problem with using the Internet is that you gradually acquire more and more Net utilities that start to take up more and more space on your hard drive. OK, so the programs themselves aren't that big, but you have got to be very organised indeed to be able to find your Traceroute, Ping, Whois and LDAP utilities at the drop of a hat.

Ipswitch, creator of the popular WS_FTP file transfer program, has come up with the perfect solution, called WS_Ping ProPack. This program is a collection of all those Net utilities in one simple-to-use package, and at £28 it's not that expensive, either.

While you may not use all of the utilities at first, you will use enough of them to make buying WS_Ping ProPack a good investment. So lets take a look at what's on offer...

SYSTEM INFORMATION

The 'About' tab in ProPack is used to view license and version information about the program, and also displays status information about your local system and network. Information includes the Winsock version and number, the number of sockets available for TCP connections, the local hostname and IP address and the free memory and drive space available. This information is very important to pass on to your service provider's technical support desk if you have problems connecting to the Net.

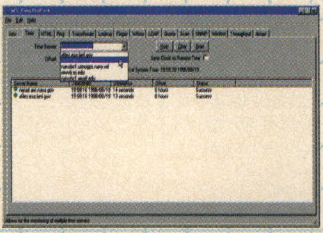

WS_Ping ProPack
File Edit Help
Info | Time | HTML | Ping | TraceRoute | Lookup | Finger | Whois | LDAP | Quote | Scan | SNMP | WinNet | Throughput | About
IPSWITCH™
support@ipswitch.com
www.ipswitch.com

WS_Ping ProPack, Version 2.10, 98.04.24
Internet Utilities
Copyright © 1998 Ipswitch, Inc. All rights reserved.
This program may not be redistributed in any manner without written permission from Ipswitch, Inc. and may only be used in conjunction with a valid license.
Send comments about this program to

```
Winsock Description:   Microsoft wsock32.dll, ver2.2, 32bit of Apr 28 1998, at 19:33:24.
Winsock Status:        On Win95.
Winsock Version:       1.1 / 2.2
Winsock MaxSockets:    32767 (UDP:65467)
Local Hostname:        dj08
Local IP Address:      127.0.0.1
Domain:                dial.pipex.com
Name Server(s):        158.43.240.4,158.43.240.3
Netmask:               0.0.0.0
Netmask:               0.0.0.0
MTU:                   1500
Free memory:           65,032 KB
Disk space on C:       1,959,520 KB Free
```

Copyright (c) 1997 Ipswitch, Inc.

Vital system information can be found using the 'About' tab



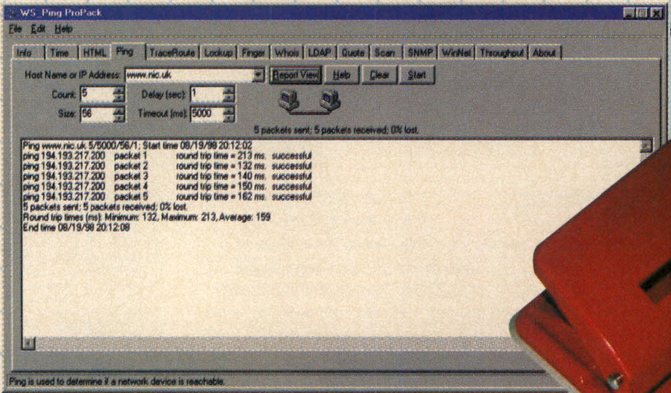
According to NORAD, my system clock is 14 seconds fast

TIME CHECK

It can be very important to make sure your system time is correct, especially if you use utilities that use the system clock to perform automatic log-ins while you are away from your PC. Clicking the 'Time' tab enables you to use WS_Ping ProPack to interrogate a remote time server to see how accurate your system clock is. Several US time servers are listed in the pop-up menu. Select one of them and click on the 'Start' button to connect to the server. The time on the server is displayed along with the discrepancy between the server and your PC's internal clock. If you check the 'Sync' box, your clock is automatically adjusted when you connect. You can use any of the five servers listed or type in the address of any other server in the 'Time Server' field.

PING

If you are having trouble connecting to a Web page, you can use Ping to see if the Web server is running. A Ping program sends an ICMP 'echo request' to a server to see if the server is active, and measures the time taken to receive a reply from the server. The average time is then displayed. All you have to do to check if a server is working is type the server name into the 'Host Name' or 'IP Address' field and then click on the 'Start' button. You can specify the number of times to check, the timeout interval and delay between Ping attempts.


WS_Ping ProPack
File Edit Help
Info | Time | HTML | Ping | TraceRoute | Lookup | Finger | Whois | LDAP | Quote | Scan | SNMP | WinNet | Throughput | About
Report View
Help
Clear
Start

Host Name or IP Address: www.nic.uk
Count: 5
Delay (sec): 1
Size: 56
Timeout (ms): 5000
5 packets sent; 5 packets received; 0% lost.

```
Ping www.nic.uk 5/5000/56/1; Start time 08/19/98 20:12:02
ping 194.193.217.200   packet 1      round trip time = 213 ms.  successful
ping 194.193.217.200   packet 2      round trip time = 132 ms.  successful
ping 194.193.217.200   packet 3      round trip time = 140 ms.  successful
ping 194.193.217.200   packet 4      round trip time = 150 ms.  successful
ping 194.193.217.200   packet 5      round trip time = 162 ms.  successful
5 packets sent; 5 packets received; 0% lost.
Round trip times (ms): Minimum: 132, Maximum: 213,Average: 159
End time 08/19/98 20:12:08
```

Ping is used to determine if a network device is reachable.

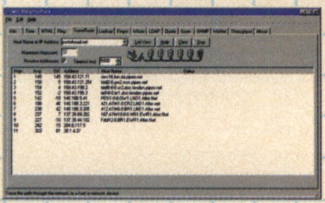
You can use Ping to see if Web servers, mail servers or FTP servers are active

TRACEROUTE

Traceroute is useful for finding trouble spots on the Internet. The Traceroute program sends a packet of information to the destination server and lists all of the routers the data passes through on its way to the destination.

To perform a Traceroute search, follow these steps:

Select the Traceroute tab and type in a host name or IP address in the 'Host Name'



You can follow the route that data takes to reach a Web site and pinpoint potential trouble spots

Huh?!

LDAP
A directory standard to publish information such as user directories on the Internet or on a company intranet. Most LDAP servers let you view email addresses, full name, country, state, city and organisation name.

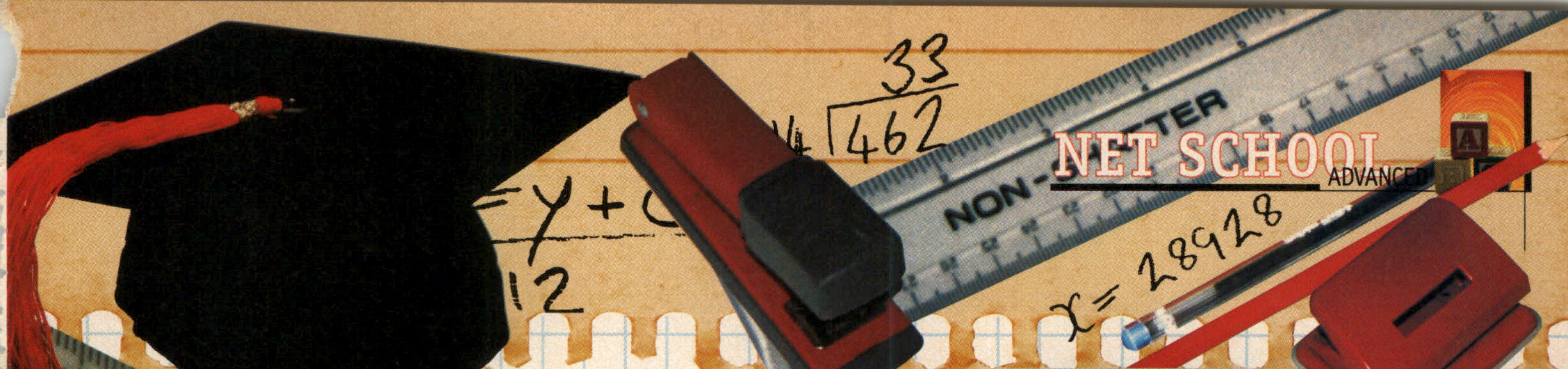
ROUTER
A network device that manages traffic between networks or subnets. Router use the information in a packet header to direct the data to the correct destination and choose the best path.

THROUGHPUT
A diagnostic tool that lets you test the data speed on a connection with a remote host. It sends a specified number of IP packets to the remote host and calculates the average bits per second sent over the communications link.

WHOIS
An Internet directory service which provides information about the owner of an Internet host or domain name, and provides contact information about the owner including name, address, telephone, postal and email addresses.

4√4

1231140

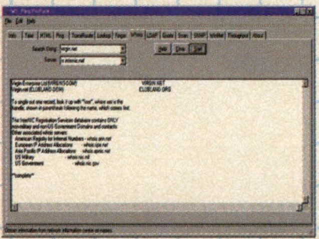


field. The Maximum Hopcount should be set to 32 (this should reach anywhere in the world). When the Resolve Addresses box is checked, the name and IP address of all the routers found are listed.

WHOIS

Domain names and disputes about them always seem to be in the news these days, so it's a good job that you can look up a domain name to see if anyone has registered it yet – and if it has been registered, you can see details of the owner.

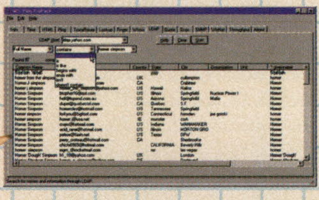
To perform a Whois search in WS_Ping ProPack, click on the 'Whois' tab, then type the domain name you want to look up in the Search String field. If you are looking up a .com, .net or .org address you should select the InterNIC Whois server (rs.internic.net). If you are looking up a .co.uk address, use the Nominet server (ns0.nic.uk). Click on the 'Start' button, wait a few seconds and the owner information is displayed.



You can use Whois to find out who owns specific domain names

LDAP

LDAP is a directory system that stores names and email addresses – you type in the name of the person who's email address you want to find, select an LDAP server from the pop-up list and click on the 'Start' button. If you've lost someone's email address, using an LDAP search is a good way to find it, as long as you know some details, such as the full name and the address (city and country) of the person you want to contact.



The Yahoo! LDAP server came up with 97 email addresses for Homer J Simpson. Strange...

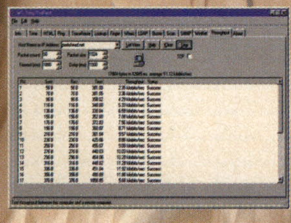
THROUGHPUT

Many Web sites seem to be very slow. You can use the Throughput function of WS_Ping ProPack to check the connection speed between your PC and the particular Web site – or FTP site, or, whatever – in question.

To test throughput on a connection, use the following procedure:

Select the 'Throughput' tab then enter a hostname or IP Address in the 'Hostname or IP Address' field. Set any of the options you want to use such as Packet Count, which determines the number of data packets sent by the ping command; the Packet Size, which determines the maximum length in bytes of each packet sent by the ping command; the Timeout and Delay times in milliseconds. Then click the 'Start' button.

When testing the connection, Throughput shows the number of packets sent, the number received by the remote host, and the time it takes to receive a response (in milliseconds). It also calculates the bits per second (which is the throughput) on the connection. The speed varies depending on the host and the size of data packets, but you should get results that are consistent with the rated speed of your modem.



This site seems to have a speedy server...

SCAN

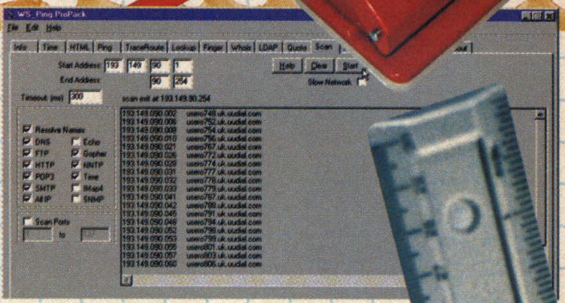
Scan searches through a specified range of IP addresses and lists the address (and the hostname, if required) of each host or device it finds. Scan can identify the different network services available running on a host such as FTP, HTTP, SMTP and so on. It can also scan the ports on a host to identify the various services.

To perform a scan, click on the 'Scan' tab and enter a range of addresses to search through. Specify the starting address in the top four boxes and the ending address in the lower two boxes. The scan runs consecutively from the number in the upper box to the number in the lower box in each position. So if you enter 193.226.1.50 in the upper boxes and put 10.60 in the lower boxes, it only scans from 50 to 60 in each of the nets from 193.226.1 to 193.226.10.

When the 'Resolve Names' option is selected, the Scan tool resolves the hostname for each active IP address and displays the names in the results. In the Services List, any option selected is checked for during the scan.

When the 'All IP' option is selected, the Scan tool finds all hosts in the specified range of IP addresses. If the option is not selected, it only finds hosts running one of the services selected in the Services List.

The Scan Ports option lets you scan port numbers on the target system. The specified IP addresses are scanned for the port numbers. If the scan finds any of these ports active, it lists the IP address of the host and the active port numbers.


WS_Ping ProPack
File Edit Help
Info Time HTML Ping TraceRoute Lookup Finger Whois LDAP Quote Scan
Help Clear Start

Start Address: 193 149 90 1
End Address: 90 254
Timeout (ms): 300
Slow Network ☐

☑ Resolve Names
☑ DNS ☐ Echo
☑ FTP ☑ Gopher
☑ HTTP ☑ NNTP
☑ POP3 ☑ Time
☑ SMTP ☐ IMap4
☑ All IP ☐ SNMP

☐ Scan Ports

```
scan exit at 193.149.90.254
193.149.090.002    usero748.uk.uudial.com
193.149.090.006    usero752.uk.uudial.com
193.149.090.008    usero754.uk.uudial.com
193.149.090.010    usero756.uk.uudial.com
193.149.090.021    usero767.uk.uudial.com
193.149.090.026    usero772.uk.uudial.com
193.149.090.028    usero774.uk.uudial.com
193.149.090.031    usero777.uk.uudial.com
193.149.090.032    usero778.uk.uudial.com
193.149.090.033    usero779.uk.uudial.com
193.149.090.041    usero787.uk.uudial.com
193.149.090.042    usero788.uk.uudial.com
193.149.090.045    usero791.uk.uudial.com
193.149.090.048    usero794.uk.uudial.com
193.149.090.052    usero798.uk.uudial.com
193.149.090.053    usero799.uk.uudial.com
193.149.090.055    usero801.uk.uudial.com
193.149.090.057    usero803.uk.uudial.com
193.149.090.060    usero806.uk.uudial.com
```

Use the Scan tool to find the IP addresses and hostnames available on a server

FINGER

The Finger tool is used to identify and display information about all users on a host system. This information includes a display of current users logged on to the host, including their user IDs and usernames, the home directory, log-in time, idle times, office location, last time they received mail and last time they read mail.

A Finger request also displays any information contained in the file .plan or the file .project in the user's home directory. These files are often used as a simple way to distribute information. For example, the Finger server at quake@geophys.washington.edu provides the latest information about earthquakes that have occurred in the north-west region of the United States.

If the specified host does not have a Finger server, the Finger tool displays a 'Failed to connect' message.

To start a Finger query, select the 'Finger' tab and enter a hostname or IP address in the Finger String text box and click on the 'Start' button.

Win a copy for yourself!

Ipswitch has given us five copies of WS_Ping ProPack to pass on to five lucky readers of *Practical Internet*. All you have to do is answer the following question correctly:

According to NORAD, how fast was Clive's system clock?

Send your answer by email to pi@paragon.co.uk. The closing date for the competition is 22 October 1998, and the first five correct entries drawn will win the prizes.

$E = MC^2$

$X = y + C$

Clive Parker's NET surgery

Rexall
MILK OF MAGNESIA TOOTH PASTE
CONTAINS 44% MILK OF MAGNESIA
HAY-FEVIN
MEDICONE
MEDICONE COMPANY, NEW YORK, N. Y.
MERKEL'S TOOTH POWDER
SQUIBB
ANTISEPTIC SOLUTION
Aspirin Tablets
CHANDLER'S-PELLETS
DIURETIC STIMULANT for KIDNEYS

Encountered a Net nasty that's making your online life hell? The answer lies with CLIVE PARKER *at helpdesk@paragon.co.uk*

USEFUL UPGRADE?

Q I recently bought a 56k modem as an upgrade from a 33.6k modem, but I found that it was downloading really slowly, generally at 2.4k. I remembered a letter in Issue 16 of *Practical Internet* that mentioned initialisation strings. I found one on the manufacturer's Web site and copied it. I wasn't quite sure what to do with it, so I pasted it into the Extra Settings box in the Advanced Connection Settings window, which seemed to solve the problem.

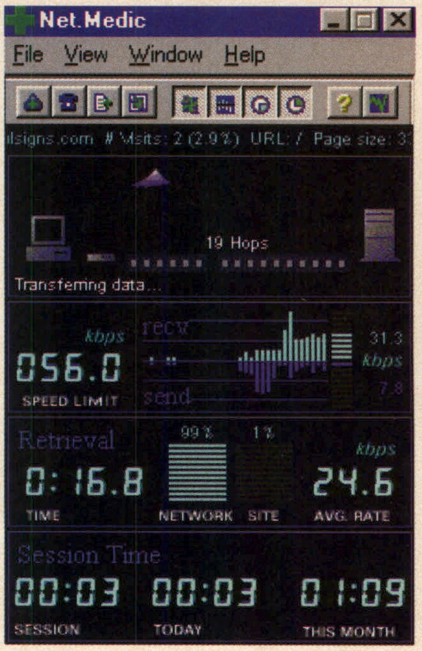
The only thing is that now, when I hold the pointer over the connection symbol in the bottom right hand corner of the screen, it says 'Connected at 115,200 bps,' which is obviously not true. What I am wondering is whether there is a program which shows the actual connection speed, because I want to be sure I've done the right thing by replacing my modem. It seems faster, but there's not a lot in it.

I realise 56k modems don't actually connect at 56k, but the further away from 33.6k (not to mention 2.4k) the better. Also, did I do the right thing with the initialisation string? More to the point, what the hell is an initialisation string anyway? Thanks in anticipation.

Jason Witcher

A You must be careful when working out connection speeds. Remember that your Web browser displays the connection speed in kilobytes per second, while modem speeds are measured in kilobits per second. So when your browser tells you it is downloading at 2.4k per second, that works out as 2,400 x 8 = 19,200 bits per second or 19.2k. But this is still not the 46k you would expect from a 56k modem.

You have done the correct thing with the initialisation string by pasting it into the Advanced Connection Settings field in the Modem control panel. An initialisation string is a series of codes that send instructions to the modem, ensuring that it is set up correctly. If your modem is now downloading faster there is nothing else you need do. To get a true idea of the actual connection speed, you need a utility such as Net.Medic. You try this software for yourself, as it's on our cover CD-ROM. The program displays information about your connection including a real-time display of the current download speed, how long it takes to retrieve a Web page and the average download speed of the download. It's a very good utility, and I always run it when connecting to the Internet with my PC.


Net.Medic
File View Window Help
lsigns.com # Visits: 2 (2.9%) URL: / Page size: 3
19 Hops
Transferring data...
kbps
056.0
SPEED LIMIT
recv
send
31.3
kbps
7.8
Retrieval
99%
1%
kbps
0:16.8
24.6
TIME
NETWORK
SITE
AVG. RATE
Session Time
00:03
00:03
01:09
SESSION
TODAY
THIS MONTH

Net.Medic displays lots of useful information about your Net connection

DATALORE

Q I wonder if you can help me. I am trying to use my Psion 5 with Message Suite installed from home, via my modem to access ccMail on my office PC. ccMail has a POP3 server – I'm told it must have for this to work. But how do I connect to it? Can I access my mailbox remotely? Do I need to have a contract with a service provider? I would be very grateful for any advice you can give me.

Jeffery Dennis

A You do not need an account with a service provider to access your ccMail account at work. What you do need are the details of the dial-up access number of your ccMail POP3 server, plus your username and password details for your ccMail account.

You should be able to get all these details from your IT manager at work. Once you have this information, you can set up your Message Suite software to access your account.

CATCH 22

Q I have recently connected up to the Internet with Global Internet. It took approximately four hours and a great deal of patience from the technical support staff to install the software. They talked me through all different procedures thinking that my modem was faulty because of the symptoms I described to them. To cut a long story short, it transpired that the

DOUBLE TROUBLE

Q Can you help me out with the following problems? I'm using Microsoft's Outlook 98 on my Gateway 266XL with 64Mb RAM, Windows NT 4.0 (service pack 3), with two separate Internet accounts.

The first time I try to send mail using any of the usual options; send, send & receive, F5 and so on, I get one of two problems. Outlook either receives mail OK but fails to send anything, or the sent mail gets rejected with following message from the system administrator: 'Your message did not reach some or all of the intended recipients. No transport provider was available for delivery to this recipient.'

In both cases, if I simply send the same emails again, everything works fine.

Also, I have two Internet accounts and the copies of the emails in the Sent folder have this in the header:

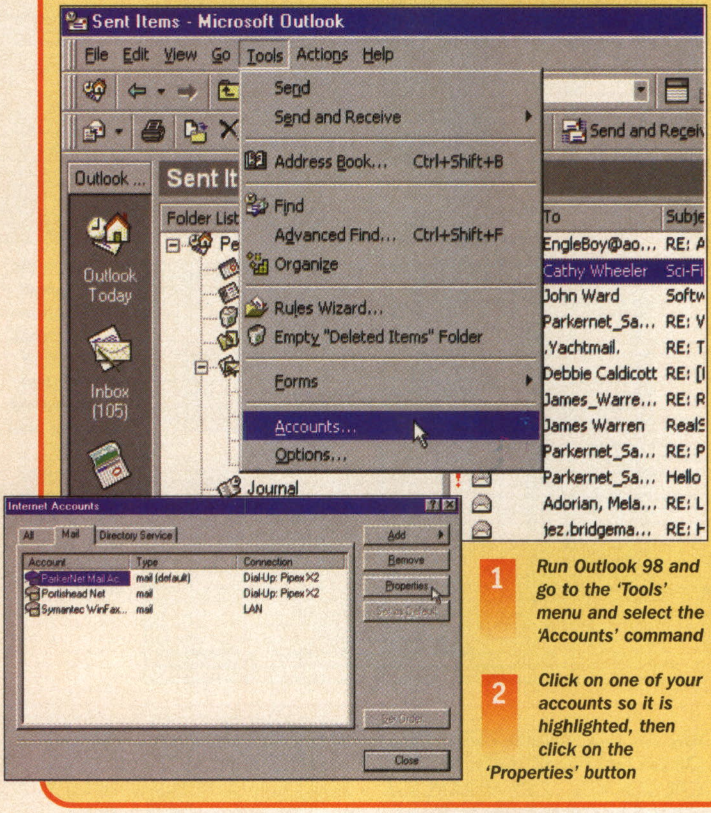
>From : Dave Rowan [account@isp1] on behalf of Dave Rowan [account@isp2]

Is there a way to select which account you want to send the email from? Thanks in advance.

Dave Rowan

A I'm using Outlook 98 as my default email client because of its wide range of other functions, and so far I haven't had any problems with it like the ones you describe. I think – although I'm not 100 per cent certain of this – that the problem arises because you are connecting to one service provider [account@isp1] while your are trying to send email using the mail server of the other service provider [account@isp2]. If your ISPs have filters set up to prevent access to their mail servers from other providers, you will get messages similar to those you describe.

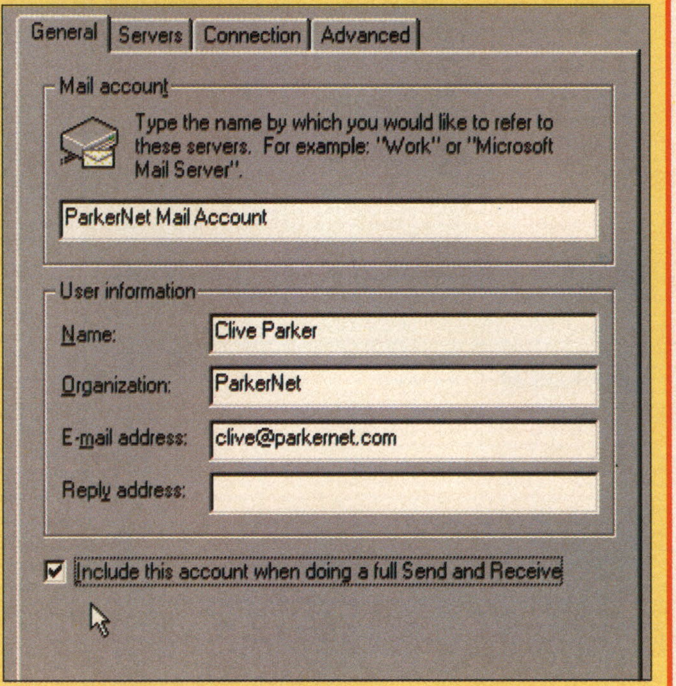
The only way to stop this happening is to connect to each ISP individually and send the mail for each account separately. Follow the steps below – it will solve the problem and also answer your second query.


Sent Items - Microsoft Outlook
File Edit View Go Tools Actions Help
Send
Send and Receive
Address Book... Ctrl+Shift+B
Find
Advanced Find... Ctrl+Shift+F
Organize
Rules Wizard...
Empty "Deleted Items" Folder
Forms
Accounts...
Options...
Send and Receive
Outlook ...
Sent It
Folder List
Outlook Today
Inbox (105)
Journal
To
Subje
EngleBoy@ao... RE: A
Cathy Wheeler Sci-Fi
John Ward Softw
Parkernet_Sa... RE: V
Yachtmail. RE: T
Debbie Caldicott RE: [I
James_Warre... RE: R
James Warren RealS
Parkernet_Sa... RE: P
Parkernet_Sa... Hello
Adorian, Mela... RE: L
jez.bridgema... RE: H
Internet Accounts
All
Mail
Directory Service
Add
Remove
Properties
Set as Default
Set Order
Close

Account	Type	Connection
ParkerNet Mail Ac...	mail (default)	Dial-Up: PipexX2
Portishead Net	mail	Dial-Up: PipexX2
Symantec WinFax...	mail	LAN

1 *Run Outlook 98 and go to the 'Tools' menu and select the 'Accounts' command*

2 *Click on one of your accounts so it is highlighted, then click on the 'Properties' button*


General
Servers
Connection
Advanced
Mail account
User information

Type the name by which you would like to refer to these servers. For example: "Work" or "Microsoft Mail Server".

ParkerNet Mail Account

Name: Clive Parker
Organization: ParkerNet
E-mail address: clive@parkernet.com
Reply address:

☑ Include this account when doing a full Send and Receive

3 *In the Account Properties box, select the 'General' tab. At the bottom of the window, check or uncheck the box in the 'Include this account...' field, then click on the 'OK' button. You will have to do this every time you want to toggle an account on or off*

problem was with the McAfee anti-virus program I had installed on my PC for safety before getting an Internet account.

I am reluctant to reinstall the program because I have been informed that some anti-virus programs of this nature can be more of a problem than an asset. This leaves me in a bit of a catch 22 situation – if I don't install the software, my computer is open to attack from any virus; if I do reinstall the software, I may experience difficulties with my Internet connection. Do you have any suggestions which may resolve my dilemma?

Paula Spence

A Anti-virus software can be a problem with some Internet software set-ups. I have never experienced problems myself, because I use an anti-virus program that is designed to work alongside Internet software without causing any of the problems you have had. I use Dr. Solomon's Home Guard software. It costs about £30 and is available from stores such as PC World, Dixons or any store that sells PC software. Visit the Dr. Solomon's home page at http://www.drsolomon.com/index_new.cfm for more information about the program.

NOT A SOUND

Q When I was using the Internet this week, I came to a section that allows me to select audio/video. When I select this option, my computer responds with the message 'Windows cannot find Pnclient.exe.' I have tried to locate this file on my computer using the Find utility, but it is not there. Is there anywhere I can get a copy of this file?

Patrick Murphy

A This message normally crops up if you are trying to use the older version of the RealNetworks RealAudio software with AOL. The solution is relatively simple if you already have the RealAudio software installed on your PC. Use Windows Explorer to explore your hard drive and locate the RAPLAYER folder. Inside, find the file called RAPLAYER.EXE and change its name to PNCLIENT.EXE.

RealPlayer: Welcome!
File View Options Presets Sites Help
Clip info: Welcome!
Channels
Add
Update
Experience Your Personal Newscast
BRIEFING
CNN
abc
Screening Room
Daily Briefing
Updated: 24/08/98 20:21
real G2

RealPlayer is one of the best ways to experience high quality sound over the Internet

Another solution would be to download the latest version of RealPlayer from the RealNetworks site at http://www.realnetworks.com.

»→

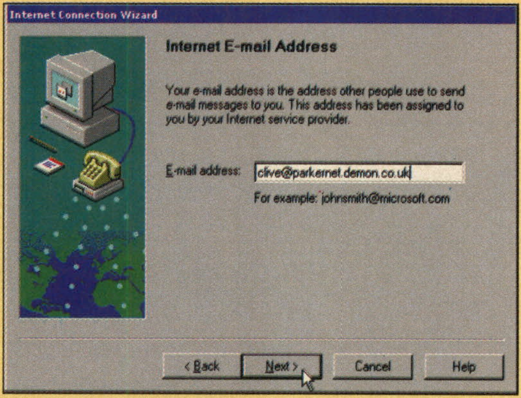
REMOTE MAIL ACCESS

Q Hello Clive. Can you please tell me if it is possible to read and reply to my email using a friend's PC that is connected to the Internet? My Internet service provider, Demon Internet, has told me to read my email using one of its secure Web pages. But when I try to reply to my mail, I have to provide a forwarding email address and sometimes replies to me get lost. A friend of mine has told me to use a method called Telnet, but I don't know how it works, could you please help me? I really hope that I am making sense and not talking complete gibberish.

Christopher Croci

A No, you're not talking gibberish. If you are going to use Telnet to access your email box, you really need to understand CLI (command line interface) commands used by the program. These can be incredibly confusing to someone who has only used Windows and has no experience with DOS or Unix-based systems. You can actually set up your email account details on as many different PCs as you like, so it's probably a better plan to use an email program like Eudora or Outlook Express. Once it is installed on your friend's PC you can set up multiple email accounts. As long as your friend doesn't know your password he

1 *On the first page of the Internet Connection Wizard, enter your name into the bar then click on the 'Next' button. In the next page, type in your Demon Internet email address. Click the 'Next' button*



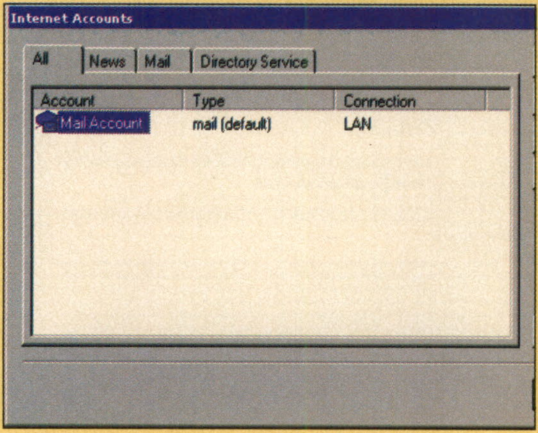
Internet E-mail Address

Your e-mail address is the address other people use to send e-mail messages to you. This address has been assigned to you by your Internet service provider.

E-mail address: clive@parkernet.demon.co.uk

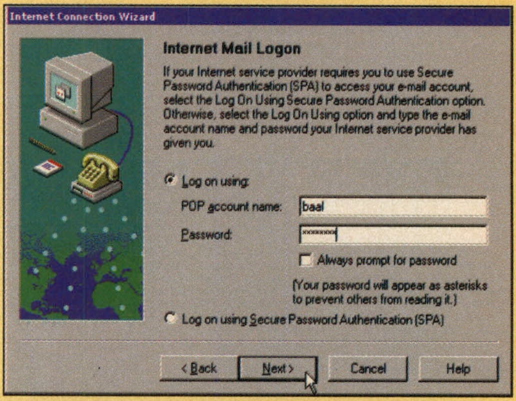
For example: johnsmith@microsoft.com

2 *Go to the Tools menu and select the 'Accounts' command. When the Internet Accounts window opens, click on the 'Add' button and select 'Mail' from the pop-up menu*



Account	Type	Connection
Mail Account	mail (default)	LAN

3 *On the next screen type in your Demon Internet username and password into the appropriate boxes, then click on 'Next'*



Internet Mail Logon

If your Internet service provider requires you to use Secure Password Authentication (SPA) to access your e-mail account, select the Log On Using Secure Password Authentication option. Otherwise, select the Log On Using option and type the e-mail account name and password your Internet service provider has given you.

● Log on using:

POP account name: baal

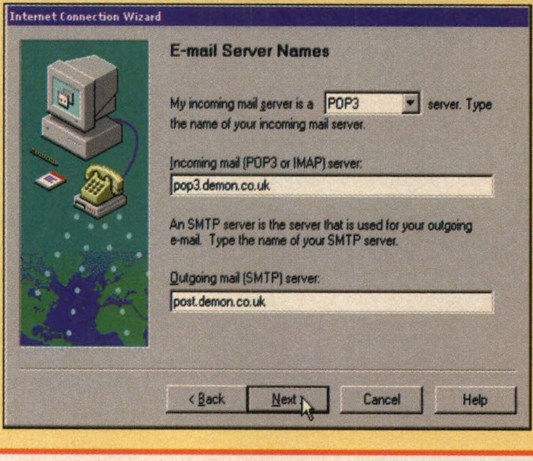
Password: ********

☐ Always prompt for password

(Your password will appear as asterisks to prevent others from reading it.)

○ Log on using Secure Password Authentication (SPA)

4 *On the email server names screen, type pop3.demon.co.uk into the Incoming Mail field and post.demon.co.uk into the Outgoing Mail field. Click on 'Next' to continue*



E-mail Server Names

My incoming mail server is a POP3 server. Type the name of your incoming mail server.

Incoming mail (POP3 or IMAP) server: pop3.demon.co.uk

An SMTP server is the server that is used for your outgoing e-mail. Type the name of your SMTP server.

Outgoing mail (SMTP) server: post.demon.co.uk

HARDWARE HASSLES

Q I have a real problem trying to download large files and emails. I have tried all the usual suggestions such as connecting at off-peak times, using a different Web browser, trying a different modem configuration, using a Web cache and so on. I've even switched to a different service provider, but without success.

Here's an example. When downloading a 650K software upgrade from the local server which should take about five to 10 minutes to transfer; after 20 minutes only about 10 per cent of the file has downloaded. It seems that there is an initial transfer of data then everything falls asleep for minutes at a time.

I seem to have a good connection and I am using a 56k modem. I am new to the Internet so I am not sure if this is a common problem or not. Perhaps I am missing something fundamental. I hope you can help. I am using a 486DX2-66 PC with an external SupraExpress 56e K56Flex modem, running Windows 95.

Fred Atkinson

A I think the final line of your email holds the clue as to what is causing your problem. Unfortunately, it's probably your hardware – your PC. Because you are using a 486DX2-66 PC, it's very likely that the I/O hardware that drives the serial ports uses a chip called a 16550 UART. Now this chip can only transfer data at a maximum speed of 19,200 bps, effectively crippling your modem to a speed that's only a third faster than a 14.4kbps modem.

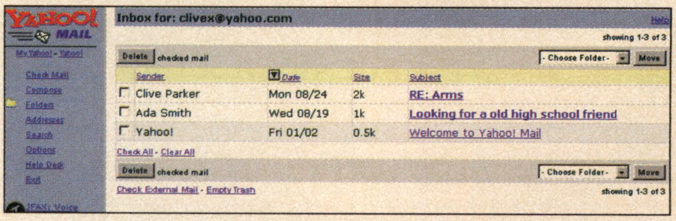
Your best bet, if you can't afford to buy a completely new PC, is to invest in a motherboard upgrade to a Pentium 133 or 166. On the other hand, a new Pentium CPU unit with 32Mb of RAM and a chunky hard drive can be found for around £500 in the large PC magazines like *PC Shopper* or *PC Plus*. You really should upgrade to a faster PC if you are going to be using the Internet.

NEVERENDING STORY

Q I use CompuServe as my service provider and I have recently converted my email service to POP3 email and I now use Microsoft Outlook 98 as my email software. I also have a Yahoo! Web-based email address. I want to retrieve my Yahoo! email using Outlook 98, but when I try to set it up, I am not able to do so, and I get the following bizarre error message: 'The settings you specified are incorrect, The server is behind a firewall. (Refer to the system administrator), The server is temporarily down.' Can you tell me if there is a way of circumventing this?

Norman Briffa

A This kind of question is turning up at an increasing rate – you are one of many



Inbox for: clivex@yahoo.com

showing 1-3 of 3

	Sender	Date	Size	Subject
☐	Clive Parker	Mon 08/24	2k	RE: Arms
☐	Ada Smith	Wed 08/19	1k	Looking for a old high school friend
☐	Yahoo!	Fri 01/02	0.5k	Welcome to Yahoo! Mail

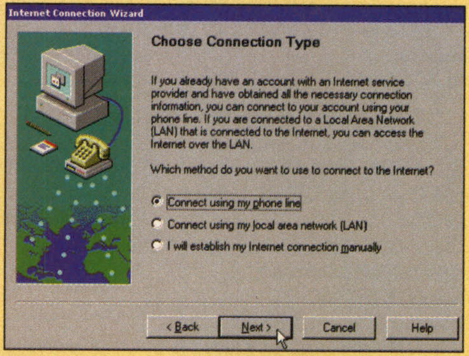
Check All - Clear All

Check External Mail - Empty Trash

showing 1-3 of 3

If you want free POP3 email, Yahoo! doesn't supply it won't be able to access your email when you are not around. Or, if your friend doesn't want to set up multiple accounts in his email software, use two different email programs. All you need to set up your email account is your username, password and the name of the mail servers at Demon used to send and receive mail. Demon's help desk can tell you the correct mail server names for your account. At the moment, the incoming (POP3) server address is pop3.demon.co.uk and the outgoing (SMTP) server is post.demon.co.uk. Here's exactly how you enter the details into Outlook Express.

5 *In the choose connection type page, make sure the 'Connect using my phone line' option is selected, unless you are collecting your mail from a PC connected to the Internet through an office LAN. Click 'Next' to continue*

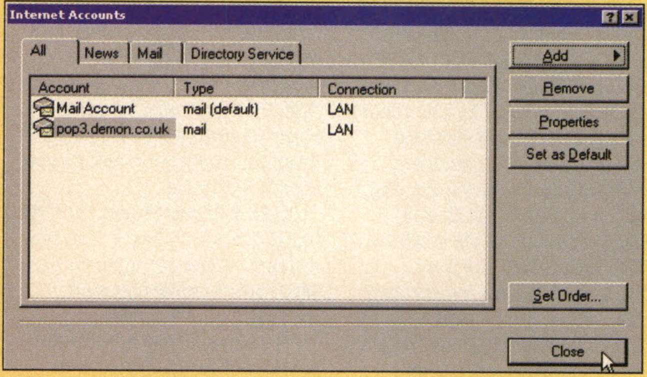

Internet Connection Wizard
< Back
Next >
Cancel
Help

Choose Connection Type

If you already have an account with an Internet service provider and have obtained all the necessary connection information, you can connect to your account using your phone line. If you are connected to a Local Area Network (LAN) that is connected to the Internet, you can access the Internet over the LAN.

Which method do you want to use to connect to the Internet?

● Connect using my phone line
○ Connect using my local area network (LAN)
○ I will establish my Internet connection manually


Internet Accounts
All
News
Mail
Directory Service
Add
Remove
Properties
Set as Default
Set Order...
Close

Account	Type	Connection
Mail Account	mail (default)	LAN
pop3.demon.co.uk	mail	LAN

6 *In the last screen, click on the 'Finish' button to complete the account details, then click on the 'Close' button in the Internet Accounts window of Outlook Express. Now you can collect your mail from your friend's PC*

readers who have asked a similar question about accessing Yahoo! email services using POP3 this month. Most Web-based email services can only be accessed by visiting the Web site where the service is available. This means that you can only read and reply to email while connected to the Internet, thus running up your phone bill. This is true of Hotmail, Netscape Mail, AltaVista mail and many of the growing band of Web-based services. Yahoo! Mail now has a POP3

➳

Rexall
MILK OF MAGNESIA TOOTH PASTE
CONTAINS 44% MILK OF MAGNESIA
HAY-FEVIN MEDICONE
MERKEL'S TOOTH POWDER
SQUIBB ANTISEPTIC SOLUTION
Aspirin Tablets U.S.P.
CHANDLER'S PELLETS DIURETIC and STIMULANT for KIDNEYS

CUT IT OUT

Q I'm fairly new to using the World Wide Web, and although I am finding it fun, I'm getting a bit fed up with the continual cut-offs. Almost every time I connect to the Web, I'll be happily moving from page to page and then everything just gets stuck for no reason. It happens on whatever page I visit – it doesn't matter which Web site I am looking at – nothing moves at all. Then, after a couple of minutes of nothing happening, my browser just cuts the connection.

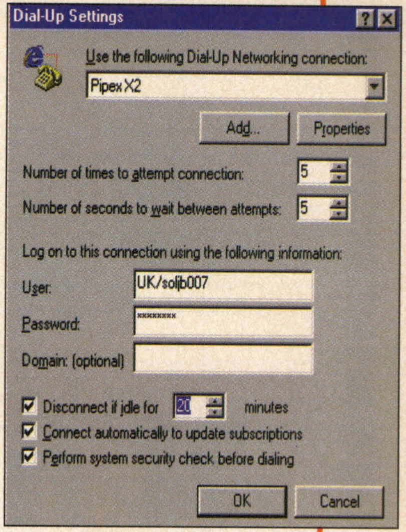
I use Internet Explorer 4 and NetDirect for access to the Web. I can't help but find the whole thing a bit suspect, though. I know things get busy and I do connect at the busy times, but every time after getting cut off, I immediately reconnect and I can get straight through to the page I was trying to look at.

Tell me, is it possible for an under-resourced service provider to time you out at busy times, just to give an impression of availability by keeping their customers moving instead of giving an engaged tone? If not, what is going on? Also, is it possible to stop my browser from automatically terminating the connection?

Peter Evans

It's highly unlikely that your service provider is cutting you off from the Internet after a specific length of time. If a service provider started doing that, it would quickly lose its customers. It's more likely that Internet Explorer 4 is freezing up, rather than your ISP shutting down your connection. Your best option is to uninstall Internet Explorer 4 using the Add/Remove Programs control panel and reinstall it from your NetDirect CD.

You can specify how long your connection remains active using the Internet control panel. Go to the Start button and select 'Settings,' 'Control Panel.' Double-click on the 'Internet' control panel to open it, and then click on the 'Connection' setting. Click on the 'Settings' button, found in the Connection box, and then enter a suitable setting in the 'Disconnect if idle for…' section. When you've done all this, click on 'OK' to finish.


Dial-Up Settings
Add...
Properties
OK
Cancel

Use the following Dial-Up Networking connection: Pipex X2

Number of times to attempt connection: 5

Number of seconds to wait between attempts: 5

Log on to this connection using the following information:

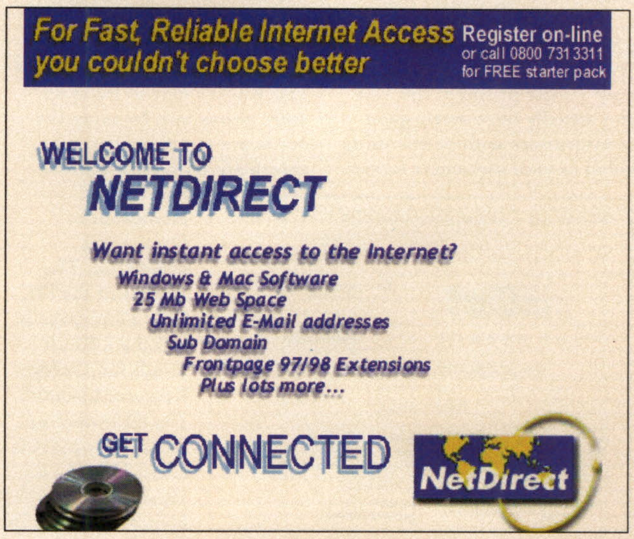
User: UK/soljb007

Password: ********

Domain: (optional)

☑ Disconnect if idle for 20 minutes
☑ Connect automatically to update subscriptions
☑ Perform system security check before dialing

You can specify how long to stay connected when the connection is idle using the Internet control panel


For Fast, Reliable Internet Access you couldn't choose better
Register on-line or call 0800 731 3311 for FREE starter pack
WELCOME TO NETDIRECT
Want instant access to the Internet?
Windows & Mac Software
25 Mb Web Space
Unlimited E-Mail addresses
Sub Domain
Frontpage 97/98 Extensions
Plus lots more...
GET CONNECTED
NetDirect

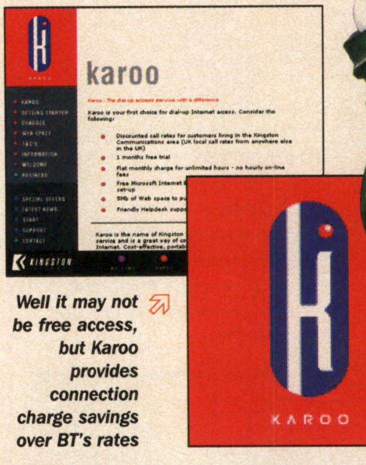
Is NetDirect letting its customers connect, and then kicking them off again, to give avoid engaged tones? No, the problem lies elsewhere option if you have signed up for a Yahoo! Online account (http://online.yahoo.com), enabling you to use email programs such as Outlook 98, Eudora or Outlook Express to access your Yahoo! mailbox. But this option is only available if you sign up and pay $14.95 a month – around £10 – in the same way as you would pay for any other service provider. So you can still access Yahoo! Mail for free over the Web, but you won't be able to access it though your POP3 email software unless you pay for an account.

FREE NET?

Q I have a question about Internet access from the city of Hull. Here, local calls within the Hull boundary are untimed, thus potentially ideal for Internet access.

Do you know if there is an Internet access node here that could be accessed by a local call? This is one situation where 0845 style 'local call' access is a positive disadvantage. How could I best go about finding if there is an ISP that will allow access via a Hull local access phone number?

Chris Freeman


karoo

Karoo - The dial-up access service with a difference

Karoo is your first choice for dial-up Internet access. Consider the following:

- Discounted call rates for customers living in the Kingston Communications area (UK local call rates from anywhere else in the UK)
- 1 months free trial
- Flat monthly charge for unlimited hours - no hourly on-line fees
- Free Microsoft Internet E
set-up
- 5Mb of Web space to pu
- Friendly Helpdesk suppo

Karoo is the name of Kingston
service and is a great way of co
Internet. Cost-effective, portab

Well it may not be free access, but Karoo provides connection charge savings over BT's rates

McKESSON'S
Aspirin Tablets
U.S.P.
100 TABLETS

A I don't know of any ISPs that have a dial-up node in Hull – almost all of them use 0845 or 0645 LoCall numbers or similar.

You may be interested to know that your local telephone company, Kingston Communications, has its own dial-up Internet service called Karoo. It provides customers in its area with discounted call rates for Internet access, and local call rates for customers outside of the area. But the calls are charged by the minute – it's not giving away untimed Internet access. The prices are 2.94p per minute during the day, 1.4p per minute off-peak and 0.85p per minute at the weekend.

The Karoo Web site is at http://www.kingston-internet.net/f-karoo-index.html, email info@kingston-internet.net or you can call customer services on 01482 602 500

WHAT IS XML?

Q I've been using the Internet for a while now – including making my own Web pages – and I think I am pretty familiar with most of the terms such as ISP, HTML, JavaScript and so on. But a friend of mine said I should be looking into coding with XML. At first I thought he was winding me up, but I have seen it mentioned in several magazines. But what is XML and where can I find out more about using it?

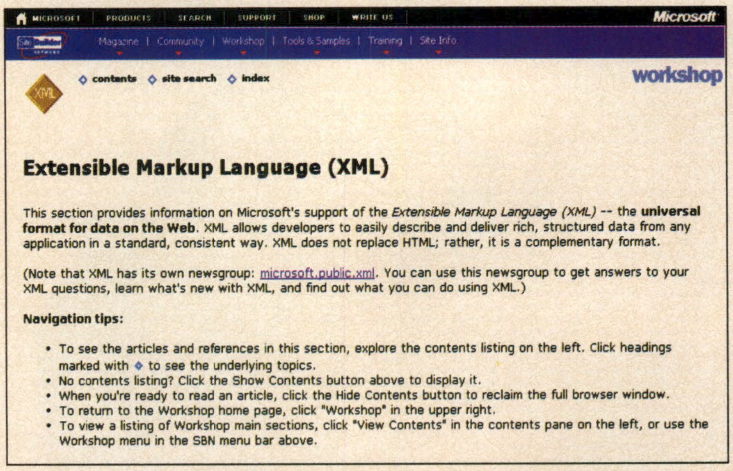
David Wagner

A XML stands for Extensible Markup Language and it's designed to provide a universal format for storing data on the Internet; the World Wide Web specifically. XML enables Web site developers to create pages of structured data taken from any application and display it on a Web page.

XML will complement HTML, but it doesn't replace it. Internet Explorer 4 already supports Microsoft's implementation of XML.

You can find out more about XML, and its associated style-sheet sub-set XSL on the Microsoft Web site at http://www.microsoft.com/xml.

A very good book about XML is *Professional Style Sheets for HTML and XML* published by WROX, ISBN 1-861001-65-7, priced at £37.49. It's a very comprehensive book and covers CSS1, CSS2, XML and XSL.



Extensible Markup Language (XML)

This section provides information on Microsoft's support of the *Extensible Markup Language (XML)* -- the **universal format for data on the Web**. XML allows developers to easily describe and deliver rich, structured data from any application in a standard, consistent way. XML does not replace HTML; rather, it is a complementary format.

(Note that XML has its own newsgroup: microsoft.public.xml. You can use this newsgroup to get answers to your XML questions, learn what's new with XML, and find out what you can do using XML.)

Navigation tips:

- To see the articles and references in this section, explore the contents listing on the left. Click headings marked with ◆ to see the underlying topics.
- No contents listing? Click the Show Contents button above to display it.
- When you're ready to read an article, click the Hide Contents button to reclaim the full browser window.
- To return to the Workshop home page, click "Workshop" in the upper right.
- To view a listing of Workshop main sections, click "View Contents" in the contents pane on the left, or use the Workshop menu in the SBN menu bar above.

Find out more about XML on the Microsoft Web site at http://www.microsoft.com/xml.

CRY FREEDOM

#IRChelp
HOMEPAGE

A I am a new user of the Internet and I have a couple of queries about it. If I email someone in another country, does it actually work out cheaper than phoning them, or would it cost the same as an international call?

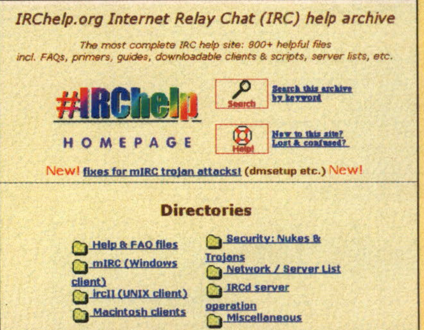
To this end, if it is cheaper to email, how do I set up a personal chatline? Would I first have to set up a Web page? Also, some of the techie talk in your magazines has me a little baffled. What do the abbreviations HTML and URL stand for?

Stephen Quee

Q Sending an email to someone in Los Angeles is a lot cheaper than making a phone call to the same person because you are only making a local call to your service provider, not an international phone call.

It's not really feasible to set up a personal chatline on your Web pages if they are hosted by your service provider. But you can actually have pretty good conversations with people using email as your messenger service. Remember that most email reaches its destination in under 15 minutes anywhere in the world. I regularly 'chat' with people all over the world in this way, sometimes exchanging a dozen or more emails over the course of a day.

If you want to chat to a friend in 'real-time,' where you can see each other's comments being typed in, you need to get yourself onto Internet Relay Chat (IRC). An IRC channel, maintained by an IRC server, transmits the text typed by each user using the channel to all of the other users using the same channel. Most IRC channels are dedicated to specific topics, usually reflected in the name of the channel. If you and your contact both agree on times to use IRC, then you can chat in real-time for the price of a local call. But it's easy to build up large phone bills by using IRC for hours at a time. For more information on IRC, visit the IRC Help Homepage at http://www.irchelp.org. The address of the IRC Help Homepage is called a URL: it stands for Uniform Resource Locator. The code used to create Web pages is called HTML: it stands for HyperText Markup Language. So now you know.


IRChelp.org Internet Relay Chat (IRC) help archive

The most complete IRC help site: 800+ helpful files incl. FAQs, primers, guides, downloadable clients & scripts, server lists, etc.

#IRChelp
HOMEPAGE
Search
Search this archive by keyword
Help!
New to this site? Lost & confused?

New! fixes for mIRC trojan attacks! (dmsetup etc.) New!

Directories

Everything you need to know about IRC can be found at the IRC Help Homepage

http://dialuk.net

dial UK

LOW COST INTERNET ACCESS

V34 / 56K / ISDN £80.00
2 year account £120.00
No connection fee
National UK access - local rates

Full news feed
Fast Internet web access
15Mb of commercial web space
Business users welcome

Unlimited connection time
Support - 7 days per week

Domain Name Registration
NO FEE only local fee (.co.uk £80)

Web Site Hosting
£40 per year
Web server and forwarding
of Unlimited email names

Web Site PLUS
£80 per year
Web server and forwarding
of Unlimited email names
Front Page 98 Extensions
Full Web access stats.
Own cgi-bin area

On Line Services
http://dialuk.net/join
http://dialuk.net/register

DialUK Net
Fareham Enterprise Centre
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Hants
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Email: sales@dialuk.net
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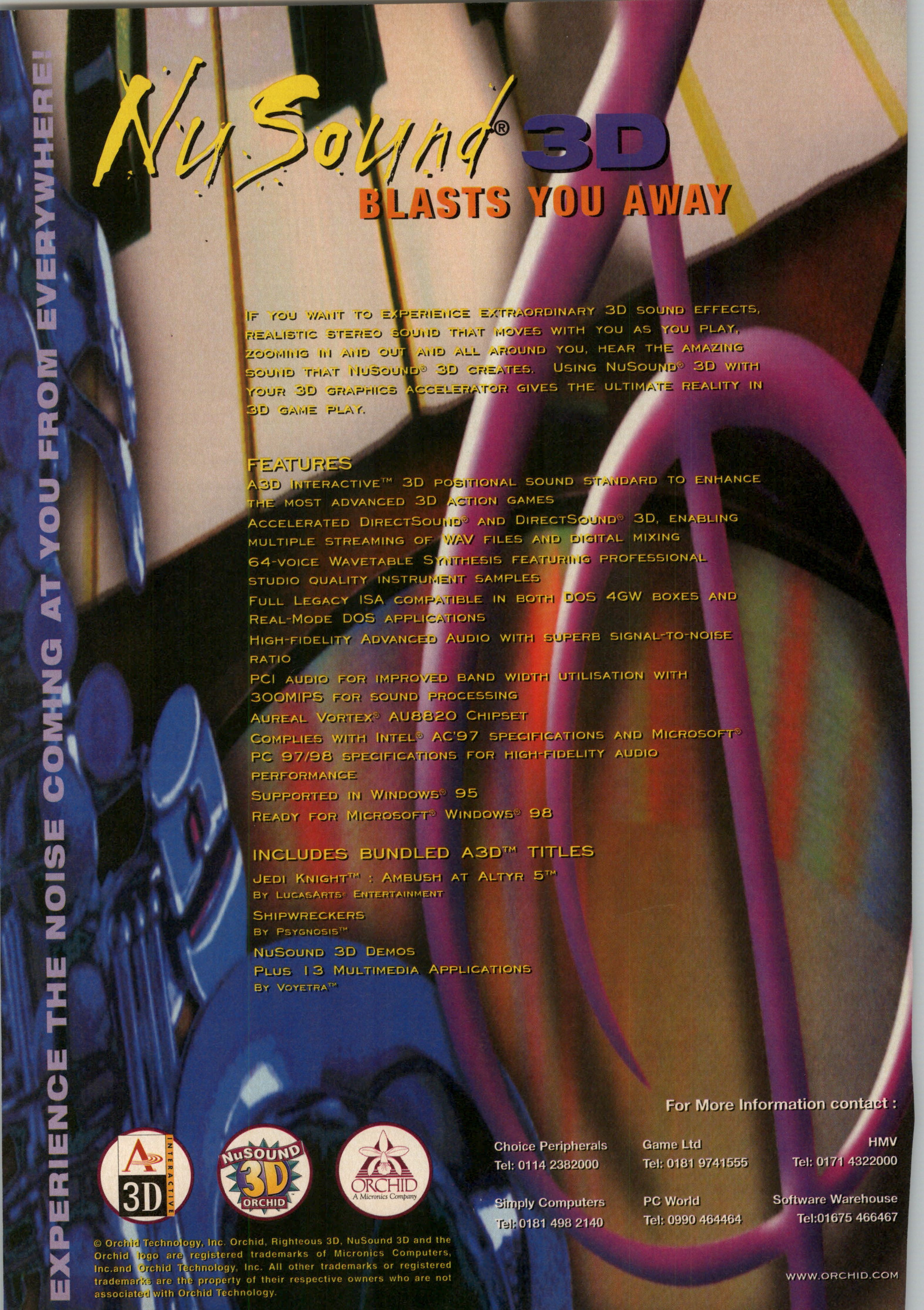

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- Ready for Microsoft® Windows® 98

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By LucasArts® Entertainment

Shipwreckers
By Psygnosis™

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Plus 13 Multimedia Applications
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Simply Computers Tel: 0181 498 2140	PC World Tel: 0990 464464	Software Warehouse Tel:01675 466467

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WWW.ORCHID.COM

NetGamer

NetGamer has been shooting away on Wireplay for much of the month, but in the 10 minutes spare, **GEOFF SPICK** *came up with the latest news!*

NETGAMER ONLINE

NetGamer is online at http://www.netgamer.net with news, reviews and information updated daily. The service is growing all the time. We want your comments, feature ideas and suggestions. Write to geoffs@net gamer.net

NETGAMER NEWS

QUAKE III ARENA ANNOUNCED

Excellent news for Quake fans. id has officially announced that it's developing Quake III Arena. id says that the game is based on a completely new gaming technology engine that enables the latest capabilities in 3D graphics. The company promises that the game will "bring gamers the quality and excitement of id's past blockbusters along with more action, more intensity and more grandeur." Sounds good so far.

"Game enthusiasts saw an incredible jump in intensity from DOOM to DOOM II, then again with Quake to Quake II. With the release of Quake III Arena, they'll get another adrenaline rush like only id can deliver. Quake III Arena will be a one-of-a-kind, first-person, action game worthy of id Software," said Todd Hollenshead, CEO of id Software.

Quake III Arena's enhanced graphics engine will display realistic 3D environments using advanced features such as curved surface rendering and high detail textures. The game will be stuffed to the brim with visual features such as moody, atmospheric use of fog and spectacular lighting.

"id Software always strives to give our fans the action-packed games they crave," said Anna Kang, id's Director of Business Development. "And, in Quake III Arena, gamers get the best of both worlds – phenomenal single-player action along with unstoppable multiplayer deathmatch capabilities via the Internet."

Quake II has recently become one of the best-selling CD-ROM games of all time, shipping more than 950,000 units worldwide since its launch on 9 December 1997. No images of Quake III Arena are currently available, but you can be sure we'll bring them to you as soon as they are.

Follow the latest developments at the id software site: **http://www.idsoftware.com.**

DEMOS TO DIE FOR

CYBERSTRIKE 2

http://www.cyberstrike2.net

Awesome combat/tactical mech game with stunning graphics.

V2000

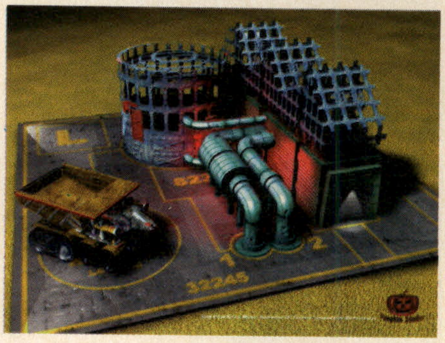
http://www.v2000.grolier.co.uk

David Braben's sequel to the classic Virus and even more annoying to control!

DAWN OF ACES

http://www.imagiconline.com

Online First World War fighter game for massive online play.

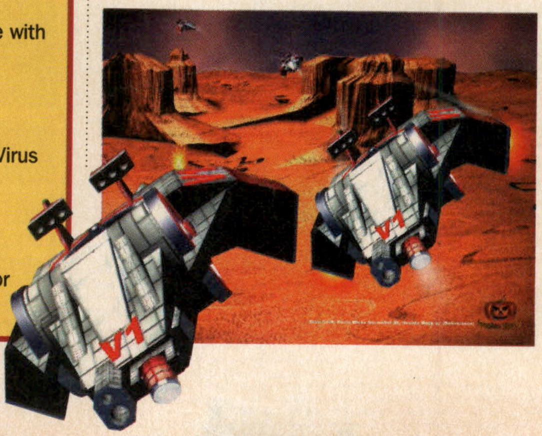


SMASHING PUMPKINS

EIDOS' latest title is Warzone 2100, developed by British team Pumpkin Studios. Set in a post-apocalyptic future, Warzone 2100 is based around small factions of surviving humans that build droids to carry out their battles. The ultimate goal is to capture the continent of North America for your own faction.

Thousands of different droid types can be created from the vital Command Droids to combat, research and resource units. There are three campaigns to fight through, and Internet play features leagues and voice comms. The game also boasts a rotatable 3D landscape, deformable terrain – you shoot it, it stays shot – research and upgrade programs, and simple resource management. Warzone 2100 looks thoroughly entertaining and a step apart from other real-time strategy games.

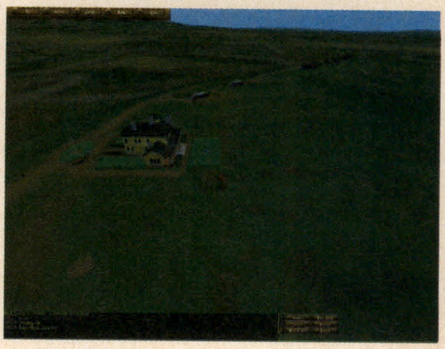
For more information, pop along to **http://www.eidos.com.**



GUNS AT DAWN

Dawn of Aces from iMagic Online use the company's proprietary MEGAplayer, allowing hundreds of pilots from around the world to fly together without concern for sluggish gameplay. Dawn of Aces also uses the company's MEGAvoice technology that allows players to actually speak and taunt with each other directly over the Internet while flying. Dawn of Aces focuses on the WWI air battles over France, with players able to fly as either Allied or German pilots. Dawn of Aces is currently playable on a free beta test. It features a variety of WWI aircraft including the Sopwith Camel, Bristol F.2B, Spad VII, Albatros D.Va, Fokker Dr.1, and the Halberstadt CL.II. In addition to the detailed cockpit artwork, Dawn of Aces will contain realistic flight modelling for each plane and navigational maps that allow players to plan their air combat missions.

Why not have a look for yourself, at **http://www.imagiconline.com.**



NETGAMER
QUAKE II MODS
photoshop
paul ridley

ALL QUAKES AND

Quake II can be anything you want it to be. NetGamer looks at the best MODs that could

Quake II is designed to be hacked to bits and put back together again. Sound, graphics, maps and equipment can all be custom made and bolted onto the game engine. With an invitation like that, it didn't take long for a thriving Quake II MOD community to grow up around the game.

From simple level design and partial conversions with a few new features, to the massive total conversion where every element of the game is rewritten, people have been given the opportunity to create a whole new world of games.

Quake II conversions cover many areas of popular culture. There's a 007 conversion in the pipeline, based on the N64 game. Transformers, those robots in disguise, are putting in an appearance as well, as are lots of other, less well-known characters and worlds. Here we take a look at some of the most promising. Currently, Action Quake is leading the way but you can expect some stiff competition very soon.

ACTION QUAKE 2

Action Quake 2 is a Quake II modification where stealth, strategy, ammo conservation, and accuracy are what matter. Slightly different from simply seeing who can get to the BFG fastest. After installation you should load up a game and get your configuration right – see the Binding boxout for help on that. Playing the game is somewhat different to traditional Quake II. Fall off a tall ledge and you die, or at least suffer a severe injury. You'll have to fix yourself up with bandages if you want to live. Shoot someone in the leg and they limp, shoot them in the head and they die. Doors have to be opened manually and weapons have realistic action. For example, you wouldn't walk into a firefight with just one round in a clip, so you can change for a full clip. This saves you the embarrassment of walking in to a fight, going bang, click, click, click, die!

The weapons in Action Quake 2 are accurately modelled and include the SOG-37 combat knife, the H&K Mk23 pistol – which is the standard side-arm used by SpecOps units worldwide – the M3 assault shotgun, the MP5/10 sub-machine gun, sawn-off shotgun and hand grenades. Then there's items like silencers, laser sights and the kevlar vest that protects your chest area, but nowhere else, from hits.

The levels are a little sparse in detail, but make up for it with places to lurk, decent killing zones and lots of places to hurt yourself. The KGB training centre is a snowy concrete hole where death really does lurk around every corner. The Altar of Kumanru is decidedly different, while locknload is a killing field of instant deaths.

The unique bleeding to death feature makes it highly frenetic as you limp around looking for those vital bandages. Sometimes it's easier just to expose yourself and take a bullet to the head. The skins mimic a host of famous films including *Die Hard*, *Reservoir Dogs*, *Commando*, *Shaft* (cool) and *Mad Max*, just to add that all-action touch. There's a fast Action Quake server if you use Wireplay but otherwise, it's a little hard to find other fast servers in the UK.

Resources

For more information on Action Quake 2 try visiting *http://action.telefragged.com*

Binding good fun

YOU need to bind the following keys to gain access to the extra commands in Action Quake 2 To do this go to the console by pressing the '~' key, and type "bind (key) command". For example "bind o opendoor" would make hitting the letter 'o' open the door. Here are some more:

opendoor:	Open door.
bandage:	Bandages your wounds.
reload:	Discharges current clip and loads a new one.
drop item:	Drops your current special item, if you have one.
drop weapon:	Drops your unique weapon, if you have one.
weapon:	Changes mode of your current weapon, if applicable.

CAPTURE THE FLAG

CTF comes with the Quake 3.17 update. It pits two teams against each other. The objective is to storm the enemy base, take their flag and return it to your base for points. Of course the enemy has to do the same to you, so the objective is to strike a balance between offence and defence. There's lots of weaponry lying around on the roughly symmetrical levels, and plenty of power-ups. The team with the most points wins, you get points for capturing the flag, saving your own flag from peril as well as normal, everyday kills.

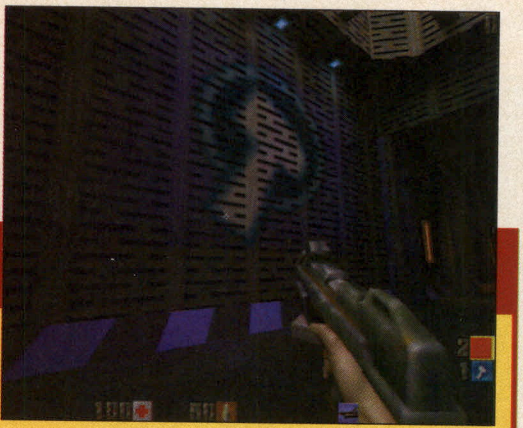
There are dozens of Capture the Flag variants out there, all with their own rules and additions. A utility like GameSpy makes it easier to find servers for whichever version you are playing. Check out the Resources box to find out more.

Resources

http://www.captured.com
http://www.quake2ctf.com

SIZES

take the world by storm!



Get your gun, then head for the enemy base, the entrance to which is emblazoned with these great big logos – so you should never get lost

A menu when you log on lets you pick which side to join

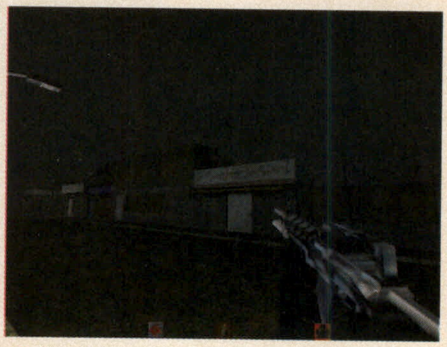
Running totals for each player and the teams lets you know who's winning!

NAVY SEALS

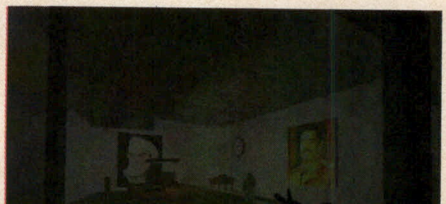
Based on the US Navy's SEAL teams, this beta version of a fantastic mod features all new graphics, levels and weapons. Set in the grim reality of special operations warfare, there's no fancy futuristic stuff here. Weapons include pistols, machine guns and rifles.

The developers conceived Navy Seals as a military simulator. As such it features several types of military occupational specialists as characters, each with a specific job to do. There's also night vision, variable fire modes on weapons, the ability to sabotage weapons and leave them lying around.

There are five maps to play around in, although at the moment only one is complete. When the final version is out, this will be huge.



Navy Seals makes use of real weapons and scenarios to make this so much more than just another Quake mod



If only they'd thought of this back in 1990. Still, I guess you can recreate the non-events

Resources

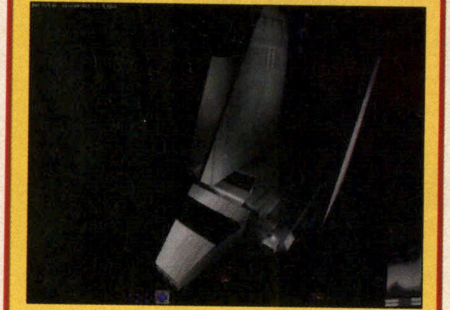
Web site

http://seals.warzone.com/

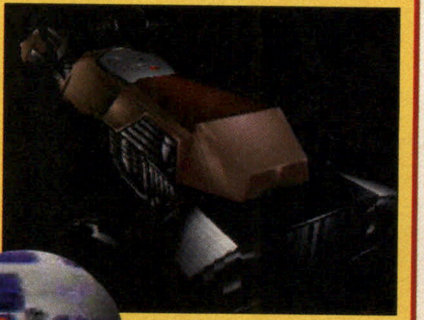
Game server

207.225.208.191

STAR WARS



THIS ultimate conversion started out being developed for the original Quake but is now targeted for Quake II. Featuring many aspects of the *Star Wars'* universe, you'll be able to fly in X-Wings, ride Walkers, Landspeeders, and Speeder Bikes. The story for the game is set right at the beginning of the rebellion, and it takes you to numerous planets from the films as well as some that fill in the back drop to the movies. Locations will be true to life – well, life in *Star Wars* anyway – ships will have crews, and bars will have patrons of many races and species. Your enemies will co-ordinate their actions, call for help, duck, roll, and side-step away from your attacks, firing at you the entire time.



Gimme, gimme, gimme. I want to ride a Speeder Bike and I want to ride one now!

Resources

http://swtc.telefragged.com

http://www.starwars.com

photoshop
paul ridley

KILLING ON WIR

Wireplay had a rough childhood but is now the best place to look for rocket jumpers and multiple frags. **GEOFF SPICK** *looks at the more mature gaming service*

We tried out Wireplay for one reason alone: to play Quake II. So apologies to anyone looking for an in-depth feature on Go and Backgammon. Historians of online gaming will know the original DOS-based Wireplay service was heavily over-subscribed and couldn't cope with the demands made of it. A couple of years down the line, and after constant improvement, the advent of Windows 95 front ends and solid connectivity rules the day.

We've spent days trying out Wireplay and suffered not one dropped connection, no sign of lag whatsoever and lots of friendly people willing to play at most hours. Installation of the software is a doddle, setting up your modem is no trouble, and signing up is done with minimal hassle. At the front desk is the latest news from Wireplay with competitions, offers and updates. The service offers three types of games: Rapid Play, Game Worlds and Mind Games. Rapid Play links you to the older action games such as Duke Nukem, Mind Games is home to traditional games and Game Worlds links you to those beasts of gaming Quake, Quake II, Unreal and the Wireplay fighter sim Air Attack.

Choose to play a game and you are taken to the appropriate lobby. In Quake II there's a downloads section, league and clan lists plus the latest happenings. Launch into the game and you are presented with a version of QView listing all the Wireplay servers. These offer a variety of games from Newbie Deathmatch, Capture The Flag, Action Quake 2 and variations thereof. Pick one of the games to play, and your version of Quake II launches and throws you into the game.

QUAKIN' ALL OVER

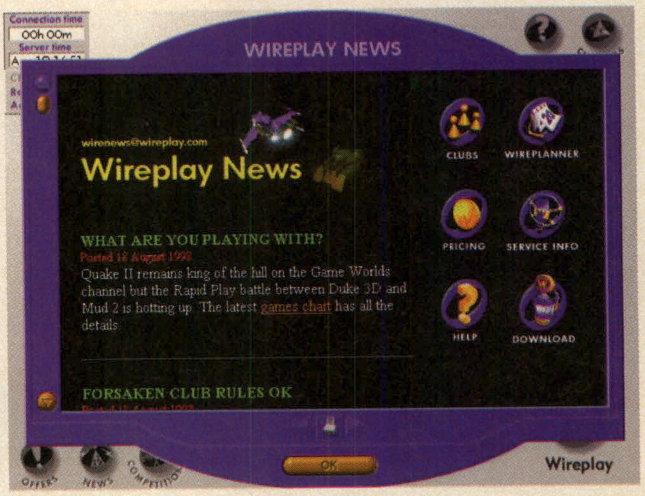
You need the latest version of Quake II to play, and whichever mods you want to play installed. You can pull these from the downloads section. Our only complaint about this is that it gives you no idea of download progress, so you just sit there waiting. But with the very solid connections and the system monitor that hides in the tray, you can guess at a finish time and wander off.

So you're playing Quake II and you're fighting in a deathmatch. What's it like? Amazingly playable is the most printable phrase that comes to mind. There is no lag, only the pauses from your own system. There's always someone like [NL] Shadow of the Night Lords to hunt you down and hog the top of the score charts, but with a supporting cast of average players, you stand a chance of killing and racking up a decent score, plus some cannon fodder newbies who will always make you look good.

During the day, the visitor count is low, but in the evenings the servers are packed, and bloodbaths are the order of the day. Playing alone is fun, but as you improve, join a clan and try playing as a team, which requires better co-ordination but offers improved protection.

WHAT FUTURE?

Should you somehow get bored of Quake II, then Wireplay already has its Unreal beta



wirenews@wireplay.com

Wireplay News

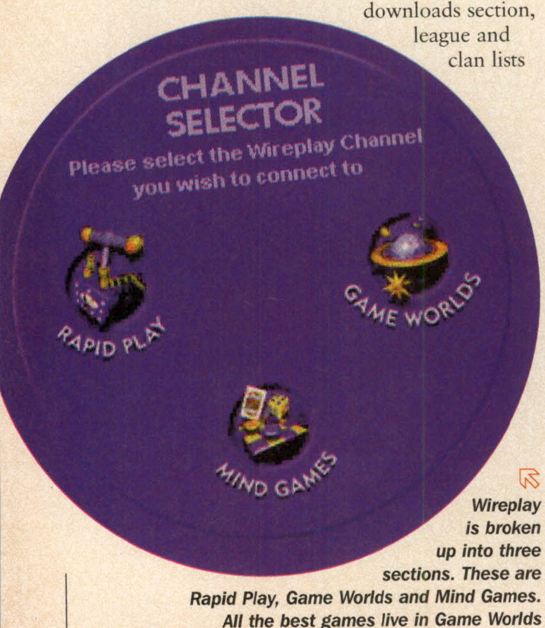
WHAT ARE YOU PLAYING WITH?

Posted 12 August 1998

Quake II remains king of the hill on the Game Worlds channel but the Rapid Play battle between Duke 3D and Mud 2 is hotting up. The latest games chart has all the details.

FORSAKEN CLUB RULES OK

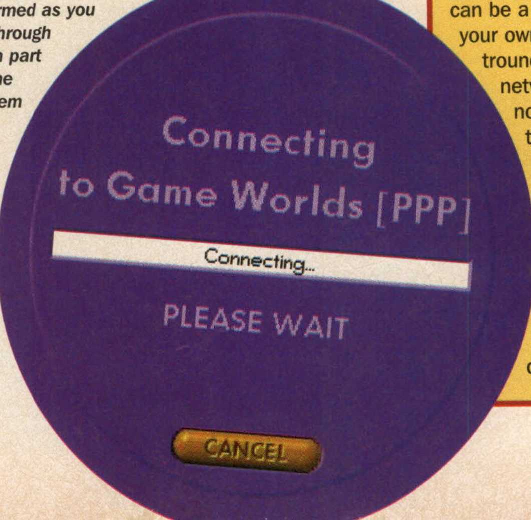
The news pages have the latest information on what's happening across the service



CHANNEL SELECTOR

Please select the Wireplay Channel you wish to connect to

Wireplay is broken up into three sections. These are Rapid Play, Game Worlds and Mind Games. All the best games live in Game Worlds



Connecting to Game Worlds [PPP]

Connecting...

PLEASE WAIT

Wireplay keeps you informed as you go through each part of the system

Chasing Shadow

HAND-to-hand Quake II combat on Wireplay can be a daunting experience. You may hold your own on the single-player game, or even trounce your mates over the office network. But these successes count for nothing when you get online. It's time to put away childish things and get kitted out for action against the big boys. Shadow, of the Night Lords, was by far the best player we saw while we were on Wireplay's Quake II server. We interrupted his busy schedule of death and persuaded him to give you the run down on what it takes to be a successful at deathmatch Quake II.

EPLAY

Signing up details – call 0800 800 918

Monthly: £9.95 (incl. VAT)
Pay a monthly rate of £9.95 and then just pay for your normal local phone calls – as little as 1p per minute at off-peak times.

Annual: £99.50 (incl. VAT)
Similar to the monthly scheme, but with a reduced rate for a one-off annual payment.

Pay as you play
An alternative scheme is 'pay as you play.' This will cost you 2.5p per minute (min. charge 5p) between 6pm and 8am Monday to Friday and all weekend. All other times, 6p per minute (min. charge 5p).

Web site: http://www.wireplay.co.uk/
From here you can download the system software, shareware versions of some games and all the patches for the games. There's also online help available and latest news.

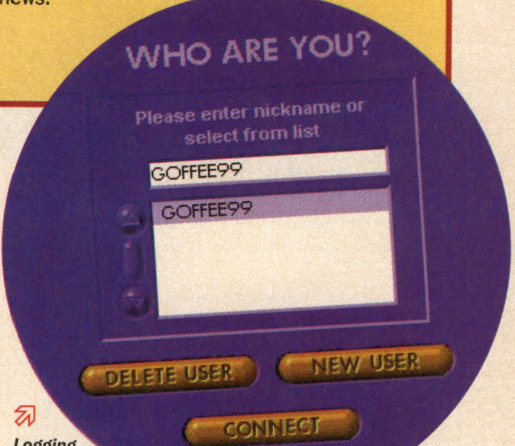
```
Magnum was shredded by *-={MyrsTyn}=-*'s shrapnel.
Kaz was blasted by baughb.
```

Frags
5
Frags/Hr
116
Players
Place
Rune
None
Chasing TECHNO
Cells

This is where it's at: hunting down some living breathing opposition and sending their bits to every corner of the room!

Huh?!

CLAN	A team of players
FRAG	A kill in an online game
FPS	First Person Shooter
LAG	Communications delay
ROCKET JUMP	Using the blast of an explosion to leap higher than normal



WHO ARE YOU?

Please enter nickname or select from list

GOFFEE99

GOFFEE99

Logging on is easy and you can set up multiple users if more than one person uses the machine

servers up and running. These were somewhat devoid of life when we tried them, but the access is fast and easy. Most new games will be added to the service as they are released. So expect games like SiN and Daikatana to generate huge followings.

The existing games still offer months' worth of entertainment in their own right. The early FPS shooters like Doom and Duke Nukem 3D offer incredible addiction and frenetic pace without the need for powerful machines. Several of these play using shareware versions so you don't even have to buy a game to join in the fun.

Gamers of a quieter disposition may enjoy the card and board games in the Mind Games section, all of which can be downloaded for free. There is no reason to sniff at these – how many of you have enjoyed Windows Solitaire card game as a diversion? Now you can play similar games in a social atmosphere.

WHAT TO WIREPLAY?

As we mentioned earlier there are three sections to Wireplay and currently 88 different games to play. So not just Quake II as you might have thought. Here's a brief guide to some of the most entertaining titles.

The Rapid Play section is where you will find the bulk of the games including Actua Soccer 2 – one of the hottest soccer games around. Gremlin have long been supporters of Wireplay and the game runs on the service out of the box.

Another classic and addictive game, Age of Empires, runs using both the full and the ➳

"My name is John Attara and I'm from Kent. I only got online in January, and I've been playing Quake II ever since. I tried to play Quake but just couldn't get into it. Quake II is the only game I play online. I think I'm an experienced player by now, and on average I spend about one and a half hours playing each day.

"The Night Lords play as a team regularly. We have 20 or so members and so it is easy to get a four-on-four or five-on-five ready quickly. We also play Capture The Flag and so get a lot of practice at general team tactics. The other members of NL are great players. Our best players include Anto, Freerange, Mrs Paddok and Blackbadger the Boss.

"Before playing on Wireplay I briefly played online, but it was very slow and wasn't really that much fun because of that. But I did well even though I had an 800 ping (I didn't know what ping meant back then). I came to Wireplay because of the much better connection and latency. I was with AOL when I started playing on the Net. I'm with LineOne now and the connection is much better. It's not as good as Wireplay but it will do. Night Lords are in the UKCCL (UK Clan Carnage League) which is a Net league so I have to be able to access the Net with a useable ping. Latency (ping) does make a big difference on the Net. Most pings are in the 200-250 range (for most of us on WP). Then you get LPBs (Low Ping B******s) with ISDN and leased lines who get pings below 100.

"To get good at deathmatching you first have to get used to the controls. I use a joystick. Most people just laugh and don't believe me when I tell them. Don't use the keyboard alone, the fixed turning rate is very slow. Use the mouse if you can. And if you can't, like me, get a good joystick (I have the MS Sidewinder FF Pro) with a rudder. Set the rudder to control your strafing and adjust the joy_yaw sensitivity, otherwise the turning rate is just the same as the keyboard. It's also a good idea to practice with Eraser Bots. Once you are used to the controls, all the movements become instinctive. You should always customise the controls to suit you as much as possible."

Wireplay
The games network

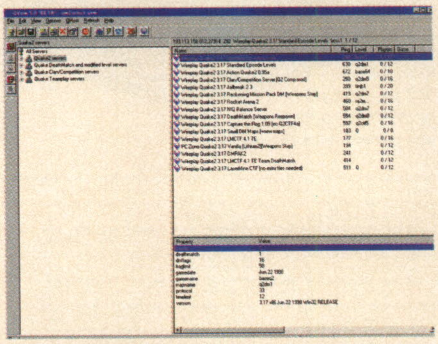
➽ trial version. But be warned, Microsoft's excellent strategy game can eat days of your life up.

Old classic FPS games including Doom and Duke Nukem 3D are available in various guises as well as more recent titles including Jedi Knight and the fun Plane Crazy. Another aviation title is EF:2000, for which a special version exists for Wireplay.

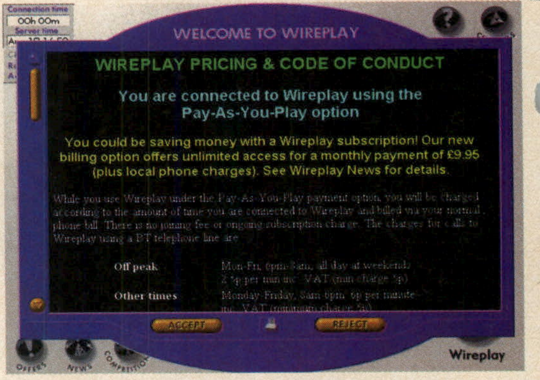
Quite what Virtua Fighter II is like over a modem we're not sure, but it's there if you want to try. You'll also find there's a fair smattering of racing games and other combat-strategy life-eaters.

As already mentioned, the Game Worlds hosts Quake and Quake II. It also supports Air Attack, a World War II flight combat game. Although this is rather primitive compared to iMagic's efforts (see the review of Guns At Dawn in the News, on page 81) it is nonetheless an entertaining source of airborne action.

For the more relaxed among you, the Mind Games section plays host to the following card games: Black Maria, Bridge, Cribbage, Nap and Poker. Board games include Wild West, Renju, Reversi, Chess, Nine Men's Morris, Backgammon, Draughts, Dalmation Pirates, Go, Gomuku, Hex, Mancala and Push & Shove. What more could you want? PI



QView shows the specific Quake II servers, which type of game is playing and how many people are playing



WIREPLAY PRICING & CODE OF CONDUCT

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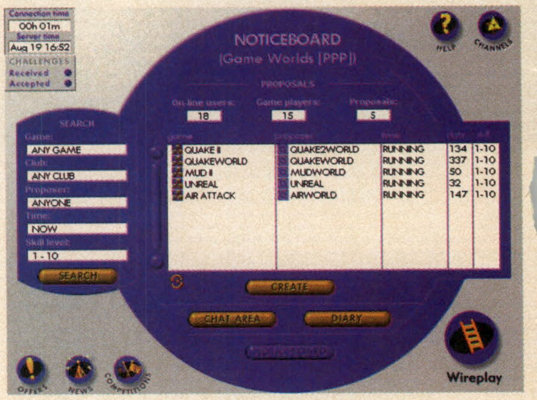
You could be saving money with a Wireplay subscription! Our new billing option offers unlimited access for a monthly payment of £9.95 (plus local phone charges). See Wireplay News for details.

While you use Wireplay under the Pay-As-You-Play payment option, you will be charged according to the amount of time you are connected to Wireplay and billed via your normal phone bill. There is no joining fee or ongoing subscription charge. The charges for calls to Wireplay using a BT telephone line are

Off peak: Mon-Fri, 6pm-8am, all day at weekends [illegible]
Other times: Monday-Friday, 8am-6pm, 6p per minute inc. VAT [illegible]

You pays your money and you takes your choice (of how to pay the money)



Connection time: 00h 01m
Server time: Aug 19 16:52
CHALLENGES
Received
Accepted

NOTICEBOARD
(Game Worlds [PPP])

PROPOSALS

On-line users: 18
Game players: 15
Proposals: 5

SEARCH
Game: ANY GAME
Club: ANY CLUB
Proposer: ANYONE
Time: NOW
Skill level: 1 - 10
SEARCH

QUAKE II	QUAKE2WORLD	RUNNING	134	1-10
QUAKEWORLD	QUAKEWORLD	RUNNING	337	1-10
MUD II	MUDWORLD	RUNNING	50	1-10
UNREAL	UNREAL	RUNNING	32	1-10
AIR ATTACK	AIRWORLD	RUNNING	147	1-10

The Game Worlds noticeboard links you to the latest games and lets you locate other people or specific events

Duke Nukem 3D is one of those old games that loses little of its appeal; it's still one of the best multiplayer experiences around

Age of Empires is a hugely popular strategy game played at a slightly more sedate pace than the more violent games

THE WORLDS MOST ADVANCED PC CONTROLLER!

Logic3

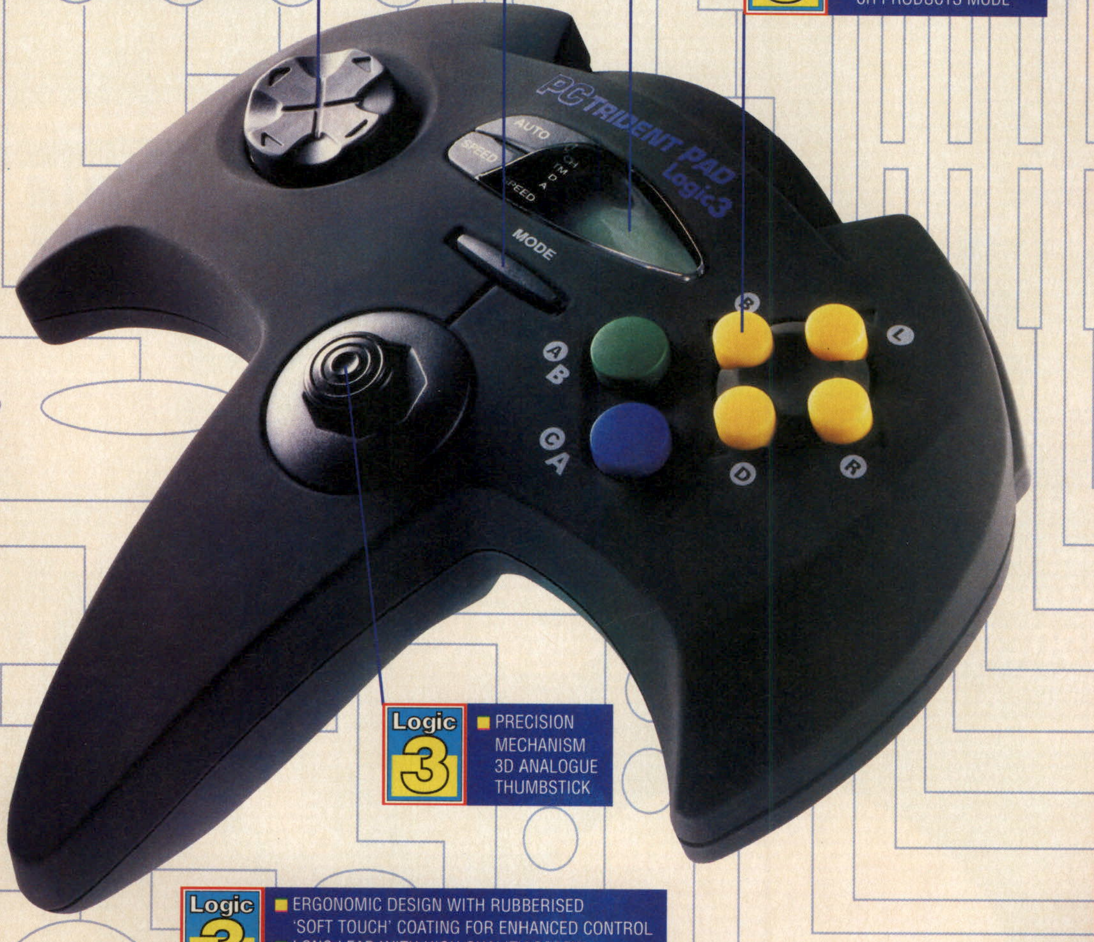
PC TRIDENT PAD

Logic 3
- SEQUENTIAL MODE BUTTON, PRE-CONFIGURED FOR: CH PRODUCTS INC. FLIGHTSTICK PRO, THRUSTMASTER FLCS, DIGITAL MODE, ANALOGUE MODE

Logic 3
- LCD THROTTLE & RUDDER DISPLAY
- CH & THRUSTMASTER COMPATIBLE
- INDIVIDUALLY PROGRAMMABLE AUTO FIRE
- VARIABLE SPEED CONTROL

Logic 3
- DUAL FUNCTION 8 WAY DIRECTIONAL CONTROLLER
- THROTTLE & RUDDER IN CH/TM MODE

Logic 3
- 9 TACTILE FIRE BUTTONS IN 'FIGHTING LAYOUT'
- TOP HAT BUTTONS IN CH PRODUCTS MODE



Logic 3
- PRECISION MECHANISM 3D ANALOGUE THUMBSTICK

Logic 3
- ERGONOMIC DESIGN WITH RUBBERISED 'SOFT TOUCH' COATING FOR ENHANCED CONTROL
- LONG LEAD WITH HIGH QUALITY SCREW CLAMP METAL CONNECTOR

The ***PC TRIDENT PAD*** *(JT277)* is a highly sophisticated Digital/Analogue controller with an eight way Directional Thumb Cursor and a 3D Analogue Stick. The unique 'Soft Touch' Rubberised Grip ensures superior comfort and control at all times. It has 9 Fire Buttons, and facilities for Throttle, Rudder, and 4-Way Viewing, with operational modes in Analogue, Digital, CH & TM. Independent Auto-Fire and an LCD Control Panel complete the attractions of the ***PC TRIDENT***, ***the world's most advanced PC Controller.***

JT251
PC TORNADO

JT250
PC PHANTOM

JT272
PC DOMINATOR

Action Pad PC
JT264
PC ACTION PAD

JT262
PC POWER PAD

JT266
PC SWIFT PAD

Logic3
SPEED
JT267
PC MASTER PAD

JT226
LOGIC 3
PC WHEEL & PEDALS

Logic 3

SPECTRA VIDEO

Unit 27, Northfield Indu [illegible] nue, Wembley, Middlesex, HAO INW, U.K.
0181 903 6625

If you'd like to get on the Internet but have absolutely no idea where to start, you need **Internet Access Made Easy**

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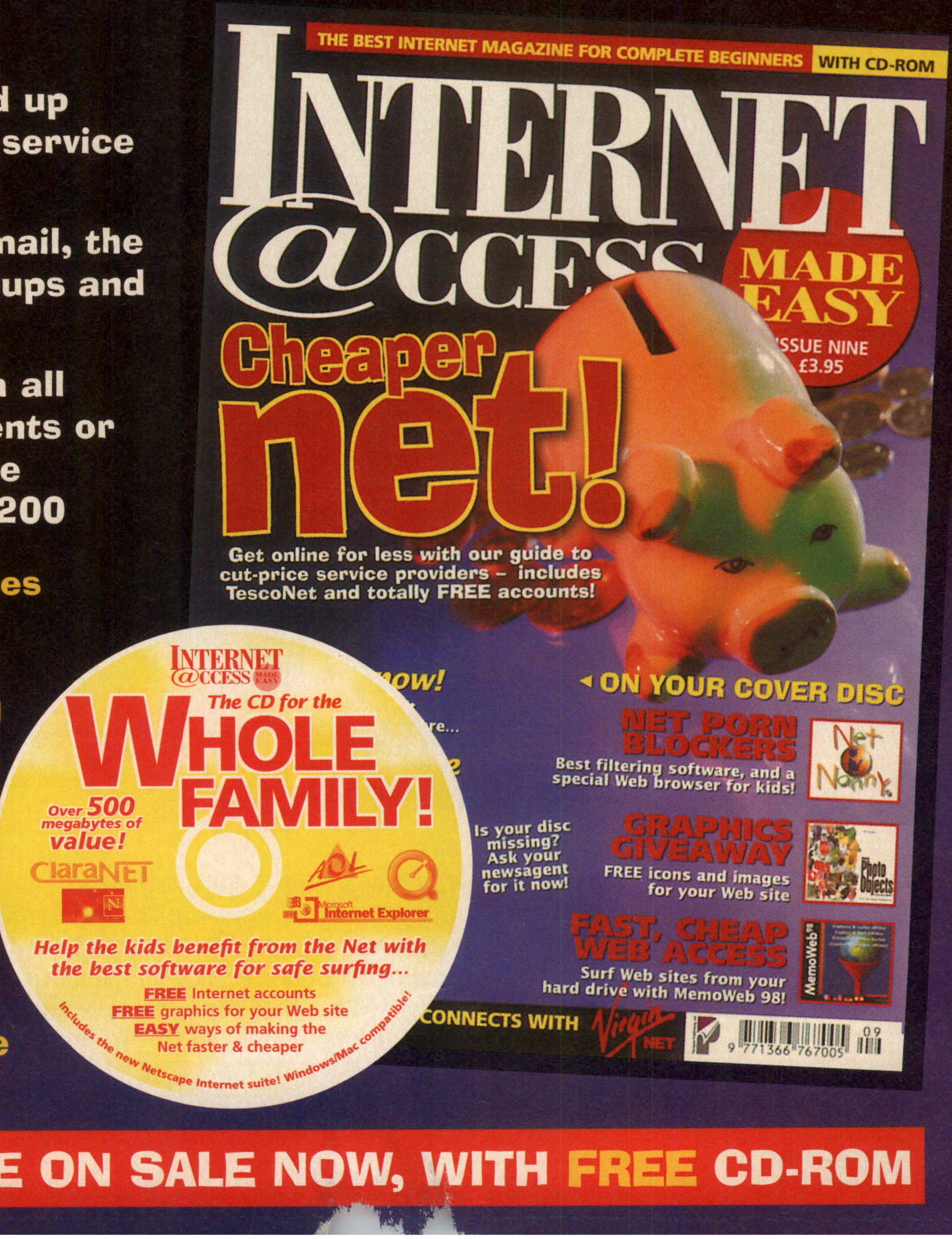

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Includes the new Netscape Internet suite! Windows/Mac compatible!

ISSUE NINE ON SALE NOW, WITH FREE CD-ROM

WIN! ONE OF 10 COPIES OF DOMINION: STORM OVER GIFT 3!

Battle of THE PLANETS

Fancy a chance at winning one of the best PC strategy games ever? Well, read on...

Dominion: Storm over Gift 3 could well be the final word in Real Time Strategy games. It's difficult to see how any developers could come up with a game to rival the sheer size of this monster. And thanks to those nice people at Eidos, 10 lucky *Practical Internet* readers can get their hands on a copy for nothing more than the price of an email or a postage stamp.

Dominion offers you a great single-player challenge as well as lots of opportunity for massive multiplayer battles. In the game you battle as one of four races – Humans, Scorps, Darken or Mercs – each of which has its own unique features and weapons. After deciding where your loyalties lie, you can either take control of a set of troops who are trying to explore a distant planet where a mysterious message claims an immense power lies hidden, or thrash it out with other players in a destruction-fuelled battle to the death. This is what we said about Dominion in our NetGamer section last month:

- "There's nothing like opening up a big multiplayer map and slogging it out to the death with other people."
- "Since you only get to see the best weapons in the last few missions for each species there's always an incentive to keep playing."
- "Dominion could be the last step forward we'll see in the RTS genre, and it opts for huge maps as its unique selling point."
- "Dominion starts out easy but gets very tough, fast."

All you need to do to win one of 10 copies of Dominion is answer this simple question:

How many different races can you choose between in Dominion?

a. Two
b. Four
c. Eight

Email your answer to pi@paragon.co.uk with the subject heading 'Dominion competition' (don't forget to include your name and address) or send it on a postcard to: Dominion competition, Practical Internet, Paragon Publishing, Paragon House, St Peter's Rd, Bournemouth, BH1 2JS.

Requirements

- P166 (P200 recommended)
- 32Mb RAM (64Mb recommended)
- 2Mb SVGA video card for lower resolutions
- 4Mb card video card for higher resolutions
- 4x CD-ROM (8x or higher recommended)
- 140Mb of free hard drive space
- Win 95 and DirectX compatible sound card
- Mouse
- Windows 95/98 or NT

Closing date for entries is 22 October 1998. Employees of Paragon Publishing, Eidos, Ion Storm and anyone associated with these organisations may not enter. Multiple entries will be disregarded. The Editor's decision is final and no correspondence will be entered into. From time to time you may be sent news about exciting new products and opportunities that are of interest to readers. If you do not wish to receive such information please let us know.

Increase your Net know-how by adding to your Practical Internet collection. Many issues, packed with features and reviews, are still available at just £3.50 each

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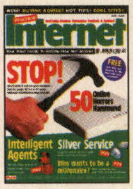
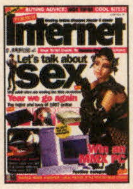
ISSUE 1

Speeding up the Net, top 30 shareware chart, Net-savvy PDAs, family intranets, ISP help desk howlers, online shopping, beginner's guide.



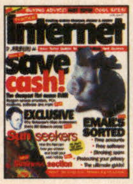
ISSUE 4

50 Net problems solved, online service providers compared, Internet-ready office suites, intelligent software agents, gambling on the Net.



ISSUE 10

Sex – why adult sites are leading the Web revolution, extra services your ISP should provide, the Net in '97 – the ups and downs, online news resources.



ISSUE 11

Full guide to cheap Net access, free and budget email software, browser plug-ins round-up, planning your holiday using the Net, FrontPage 98 reviewed.

ISSUE 12

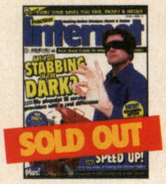
How to sort out your finances by using the Net, playing games online – including Quake II deathmatches, real-time chat facilities, brand new home page section.

ISSUE 13

Getting the best out of your home page with simple multimedia effects, getting a job on the Net, V.90 – the 56k modem standard explained, behind the scenes at Demon.

ISSUE 14

Cover CD with 3,904 hours of free online time, portable handheld Net gadgets tested, beginner's guide to making video calls, avoiding the pitfalls of Net law.



ISSUE 15

18 service providers reviewed, the latest Net games, software downloads to beef up your connection, 40 ways to speed up the Net, simple Web searching.

ISSUE 16

Bargains galore! Tips on getting access to the Internet for nothing, how you can save money by buying on the Net, and essential information on getting the best from your ISP.

ISSUE 17

Over 1,500 of free online time on the cover disc! Why you need a V.90 modem now; we test the fastest models. The best kit available for the Net-head on a budget.

ISSUE 18

Use your modem as an answerphone, fax machine, and to access bulletin boards. How to make a Web site in an hour, with no software needed. Net neighbours from hell.

ISSUE 19

The results of our ISP survey – see who you voted the winner. Where to find the best music on the Net, and how to make your own. Beating spam. Web hosting for businesses.

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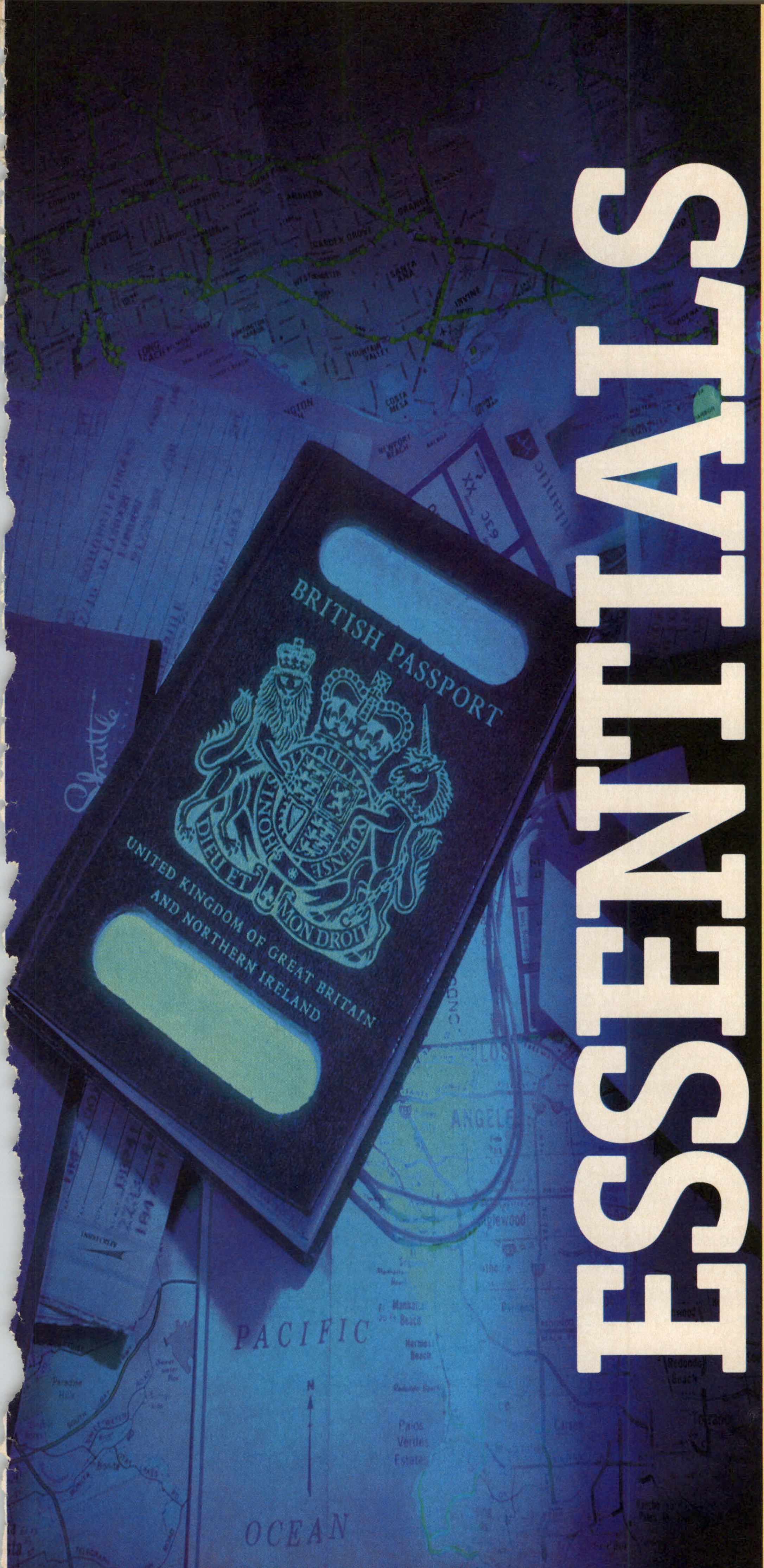
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ESSENTIALS

Our guide to modems and Net software. Plus comprehensive service provider listings, useful Web addresses and a glossary – the real essentials

92

56k Modems

The link between your computer and the Net. Whether it's an internal or external modem, or a card modem for your laptop, check here for the prices of 56kbps models.

94

Software

No one likes paying for software, so we've compiled a list of free and cheap programs that you can download from the Net. Plus our pick of the month's best shareware.

97

Service providers

Our constantly updated list of over 200 service providers allows you to continually check prices and services to make sure you're getting the best deal.

Glossary & URLs

Turn here to find out what that confusing jargon means – all explained in plain English.

106

PC, modem and software firms, search engines, and much more...

US Robotics
Sportster Voice
33.6 Faxmodem
MultiModem
MultiTech

56k modems

When it comes to getting hold of a modem, speed is what really matters. Get the fastest one you can afford – you won't regret it

Modems are the key to the world of the Internet, and without one you aren't going anywhere. Thankfully, the days of slogging away with a sluggish 14.4kbps model are long behind us. No longer do we have to wait half a day for our favourite pictures to appear on the screen when we access a Web page, or spend hours downloading shareware programs. Choosing the modem that is best for you is still not an easy decision to make, however. Prices vary depending on who made your modem and how fast it is.

So what should you be thinking about before making the great modem purchasing decision? There are a number of points that are well worth bearing in mind which will make things easier.

You'll have to consider how much you want to spend. A decent modem should cost you between £80 and £180, but to be honest, it's much better to go for the fastest you can afford – it really is

MODEMS

MAKE	MODEL	SPEED	FAX	VOICE	V.90 UPGRADEABLE	PRICE	COMPANY	CONTACT
BT	Prologue K56EV Plus	56	y	y	Flash	£117	BT	0118 981 4110
Diamond	Supra Express 56e	56	y	n	Flash	£79.99	Diamond	01189 444400
Eurotech	Premier 56K SVDe	56	y	y	Flash	£79.95	Eurotech	01189 810011
Global Village	Teleport 56K (Mac)	56	y	n	Flash	£129	Global Village	01256 868008
Hayes	ACCURA 56k External	56	y	y	Flash	£149	Hayes	01276 704400
	ACCURA 56k Internal	56	y	y	Flash	£139	Hayes	01276 704400
Lasat	Safire 560 Voice	56	y	y	Flash	£110	Lasat	0045 9671 1000
Logicode	56k Voice/Fax	56	y	y	No	£69	Central	01908 234340
Motorola	ModemSURFR	56	y	n	Flash	£185	Motorola	01293 404343
	VoiceSURFR 56K Internal	56	y	n	Flash	£200	Motorola	01293 404343
MultiTech	MT5600ZDXV-UK	56	y	y	Flash	£149	MultiTech	0118 959 7774
	MT5600ZDX-UK	56	y	n	Flash	£129	MultiTech	0118 959 7774
Novatech	56K Fax/Voice Internal	56	y	y	Flash	£59	Novatech	0800 666500
	56K Fax/Voice External	56	y	y	Flash	£69	Novatech	0800 666500
Pace	56 Voice External	56	y	y	Flash	£139	Pace	0990 561001
	56 Voice Internal	56	y	y	Flash	£89	Pace	0990 561001
	56 Voice Mac	56	y	y	Flash	£119	Pace	0990 561001
	56 Solo	56	y	y	Flash	£199	Pace	0990 561001
Roldec	Fax/Modem Internal	56	y	y	No	£37	Roldec	01902 456464
	Fax/Modem External	56	y	y	No	£57	Roldec	01902 456464
US Robotics	Sportster Fax Modem	56	y	y	Flash	£119	3Com	0800 225252
	Sportster Message Plus	56	y	y	Flash	£170	3Com	0800 225252
	Courier I-modem (ISDN)	ISDN	y	n	n/a	£299	3Com	0800 225252
	Winmodem (Internal)	33.6	y	y	Flash	£99	3Com	0800 225252
Zoom	ZOO-56I (Internal)	56K	y	y	No	£57	Novatech	0800 666500
	ZOO-56e (External)	56K	y	y	No	£74	Novatech	0800 666500
ZyXEL	Elite 2864 (ISDN upgradeable)	28.8	y	y	Flash	£425	P&L Systems	01494 432422
	Omni 288S	28.8	y	y	Flash	£249	P&L Systems	01494 432422

worth it. In fact, the fastest modem technology for home users, 56kbps, should be well within the reach of most pockets. And there's more good news – the days of the incompatible x2 and K56Flex technologies are numbered, and a unified 56kbps modem standard, known as 'V.90' has been agreed. So long as your x2 or K56Flex modem is 'flash upgradeable,' you won't have to pay anything to upgrade to V.90 – it'll just be a case of downloading code from your modem maker's Web site. 3Com, producers of the US Robotics range of modems, have got to market first with V.90 upgrades, so a lot of makers will be falling over themselves to follow suit. Some modems will allow you to run V.90 alongside K56Flex or x2, which makes the whole transition easier. Basically, if you're buying a modem now, make sure that it's flash upgradeable to V.90. If you buy one that isn't, you'll have to pay for the transition. You might not think it that important to pay more for a few extra kbps, but a faster modem means a faster Net connection, so you will spend less time online – and thus incur lower telephone charges (and, if you are signed up with a provider that charges by the hour, lower account costs). Make sure you've got a modem to phone-socket lead, somewhere to plug it in, and maybe a telephone adaptor, so you can have your modem and phone plugged in at the same time.

Huh?!

V.90 UPGRADEABLE

The fastest modem speed over normal phone lines is 56kbps, and the Internet industry has breathed a sigh of relief now that a standard, V.90, has been agreed. Your existing modem may be upgradeable to the new standard by replacing the chips, or using a software 'Flash' upgrade, usually via the maker's Web site.

FAX

The ability to send faxes may seem a superfluous attraction, now that email is so popular. But it's nice to know that you've got the option, if you do want to send faxes.

MODEM SPEED

Modem speed is measured in kbps – kilobits per second. This roughly translates as how many bits of information you can transfer within a specific amount of time.

VOICE

Many modems also support voicemail. The column below lets you know whether a particular model will support this feature.

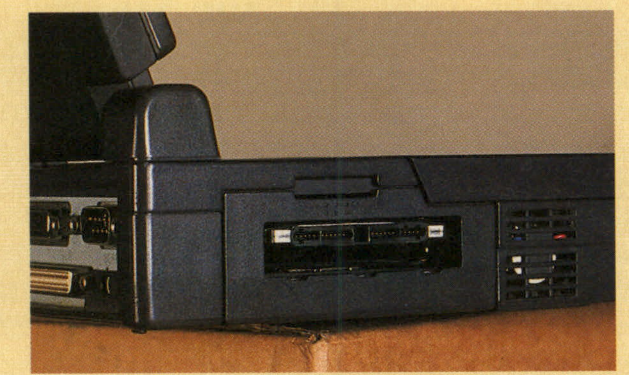
Voice, Fax & Data Modem
56
Insert Card
pace

PCMCIA cards

Laptop owners don't want to carry around bulky modems. So get a PCMCIA card, which allows you to connect to the Net while on the move

PCMCIA stands for the Personal Computer Memory Card International Association. This is the organisation that set the standard for PC cards. These were originally created for laptop computers to ensure that they were still capable of offering similar functions as desktop models. After all, there was little point in having a portable computer if you needed a clunky modem to connect to the phone lines. PCMCIA cards simply slot into the back of your laptop and the cable which comes with it plugs into the phone socket, just like a conventional modem.

Things to consider when buying a PCMCIA card are the speed and compatibility of the card. Again, go for 56kbps if you can afford it, as speed pays for itself. If you do have a laptop PC, you'll find these cards very useful for Internet access away from the home or office.



PCMCIA CARDS

MAKE	MODEL	SPEED	FAX	VOICE	PRICE	COMPANY	CONTACT
Compaq	336 DataFax	33.6	y	n	£185	Compaq	0845 270 4000
Pace	NB 56 Voice	56	y	y	£129	Pace	0990 561001
	NB 56 Mac	56	y	n	£129	Pace	0990 561001
Psion	Gold Card V34	28.8	y	y	£175	Psion Dacom	01908 261686
	Gold Card 56	56	y	n	£209	Psion Dacom	01908 261686
MultiTech	MT 2834LTI	28.8	y	n	£149	MultiTech	0118 959 7774
US Robotics	Sportster	28.8	y	n	£199	USR	01734 228200

Software

Looking for bargain software? We've compiled a list of shareware – which is fully featured, but you are obliged to pay and register; freeware – which costs you absolutely nothing; and demo software – which is usually either time-limited, or a less functional version of the full package. Let the downloads begin...

WEB-AUTHORING PACKAGES

PRODUCT	PLATFORM	DOWNLOAD SIZE	PRICE	CONTACT
FlexED Pro 2.6beta	Win95, NT, 3.x	914Kb	AUS $39.95	http://www.infoflex.com.au/flexed.htm
HomeSite 3.0	Win95, NT, 3.x	6.3Mb	$89	http://www.allaire.com/
HotDog [Express] 4.54	Win95, NT	6.1Mb	$49.95 (professional: $149.95)	http://www.sausage.com/
HoTMeTaL Pro 4.0	Win95, NT	20Mb	$129	http://www.sq.com/products/hotmetal/
Nachos HTML Editor 2.3	Win95	1.4Mb	$35	http://www.exit109.com/~oz/nachos
PageMill 3.0	Win95, NT	13.6Mb	£39	http://www.adobe.co.uk/products/pagemill/prodinfo
Under Construction 98 (2.02b)	Win95	6.3Mb	$29.95	http://www.gplanet.com/
TC-director 97 beta	Win95, NT, 3.x	3.6Mb	$30 (3.x version is US $25)	http://www.tashcom.com/
Visual Page 1.0.2	Mac	6.2Mb	$79.95	http://cafe.symantec.com/

WEB BROWSERS AND NEWSGROUP READERS

PRODUCT	PRODUCT TYPE	PLATFORM	DOWNLOAD SIZE	PRICE	CONTACT
Anawave's Gravity 2.0	Newsgroup reader	Win95, NT	2.3Mb	$39.95	http://www.anawave.com/gravity/index.html
Arachne 1.20 b6.1	Web browser	DOS	975Kb	Free	http://www.naf.cz/arachne/download.htm
Cello 1.0	Web browser	Win95, NT, 3.1	320Kb	Free	http://www.download.com/PC/Result/TitleDetail/0,4,207-15537,501000.html
Free Agent 1.11	Newsgroup reader	Win95, NT, 3.x	1Mb	$29	http://www.forteinc.com/forte
Internet Explorer 4.01	Web browser/Internet suite	Win95, NT, 3.x, Mac	varies	Free	http://www.microsoft.com/ie/
Netscape Communicator 4.04	Web browser/Internet suite	Win95, NT, 3.x, Mac	10Mb	Free	http://www.netscape.com/
Newswatcher 2.1.6	Newsgroup reader	Mac	663Kb	Free	http://charlotte.at.nwu.edu/jln/progs.ssi
Opera 3.0	Web browser	Win95, NT, 3.x	1.1Mb	$35	http://operasoftware.com/
TIFNY 1.2	Newsgroup content filter	Win95, NT	2.3Mb	$29.95	http://www.tifny2.com/
VoiceBrowser	Web browser	Win95, NT	4.4Mb	$19.95	http://www.verbex.com/
Web Prowler 4	Web browser	Win95, NT	2.4Mb	Free	http://www.geocities.com/~macrobyte/

GRAPHIC EDITING SOFTWARE

PRODUCT	PLATFORM	DOWNLOAD SIZE	PRICE	CONTACT
A Smaller Gif 1.07	Win95, NT, Mac	varies	$22	http://www.peda.com/smaller/
CyberView Image 1.02	Win95, NT	983Kb	Free	http://www.cyberviewcd.com/
Paint Shop Pro 4.14	Win95, NT, 3.x	3Mb	$69	http://www.jasc.com/
Photo Line 2.25	Win95, NT	1.7Mb	$69)	http://www.ciebv.com/
Ulead Gif Animator 2.0	Win95, NT	4.3Mb	$39.95	http://www.ulead.com/webutilities/ga/ga_downf.htm
WebGraphics Optimizer 2.04	Win95, NT	5.4Mb	$39	http://webopt.com/
Xara 3D 1.06	Win95, NT	445Kb	£20	http://www.xara.com/xara3d/

FILE COMPRESSION/DECOMPRESSION UTILITIES

PRODUCT	PLATFORM	DOWNLOAD SIZE	PRICE	CONTACT
Stuffit Expander 4.0.1	Win95, Mac	273Kb	varies	http://www.aladdinsys.com/
Turbo Zip 2.1	Win95, NT	1.7Mb	£29.50	http://www.turbozip.com/
Wallaby 95 (5.01)	Win95, NT	1.4Mb	$24.95	http://www.wallaby95.com/
WinZip 6.3 (sr1)	Win95, NT, 3.x	709Kb	$29	http://www.winzip.com/
ZipMagic 1.0 (6/28 Release)	Win95	1.2Mb	$39.95	http://www.mijenix.com/zipmagic.htm

MISCELLANEOUS NET SOFTWARE

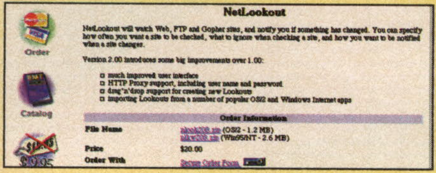
PRODUCT NAME	PRODUCT TYPE	PLATFORM	DOWNLOAD SIZE	PRICE	CONTACT
Anawave WebSnake 1.23	Web spider	Win95, NT	1.9Mb	$29.95	http://www.anawave.com/websnake/
CuteFTP 2.0	FTP client	Win95, NT, 3.x	843Kb	$34.95	http://www.cuteftp.com/
DiscPlay	Audio CD player	Win95, NT	1.6Mb	$17.25	http://www.obvion.com/discplay/download/
eSafe 1.1	Security utility	Win95	6.5Mb	$99	http://www.esafe.com/
Eudora Light	Email client	Win95, NT, 3.x, Mac	3.4Mb	Free	http://www.eudora.com/
Fetch 3.0.3	FTP client	Mac	990Kb	$25	http://www.dartmouth.edu/pages/softdev/fetch.html
GraphicConverter 3.1	Graphic utility	Mac	2.7Mb	$30	http://www.lemkesoft.de/
Ircle 3.0b10	IRC client	Mac	1.2Mb	$15	http://www.xs4all.nl/~ircle/
McAfee VirusScan 3.0	Virus scanner	Win95, NT, 3.x, Mac	1.4Mb	$19.99	http://www.mcafee.com/
MailTalkX 2.1	Email filtering software	Win95, NT	1.9Mb	$19.95	http://www.softbytelabs.com/MailTalkX/
mIRC 5.31	IRC client	Win95, NT, 3.x	951Kb	£10	http://www.mirc.co.uk/
Pegasus Mail 2.55	Email client	Win95, NT, 3.x, Mac	1.7Mb	Free	http://www.pegasus.usa.com/
POPIt Mail Notifier PLUS 1.8	Email notification	Win95, NT, 3.x	165Kb	$10	http://www.Pro-Pro.com/POPIt.htm
ProTERM 1.2.4	Telnet client	Mac	821Kb	$80	http://www.intrec.com/
UnMozify for Internet					
Explorer 6.1 Build 613	Web cache explorer	Win95, NT	473Kb	$29.95	http://www.evolve.co.uk/unmozify
UnMozify for					
Netscape 6.1 Build 613	Web cache explorer	Win95, NT	483Kb	$29.95	http://www.evolve.co.uk/unmozify
WinDownload 4.0 (12/30 Release)	File download manager	Win95, NT	1.8Mb	$20	http://mason.gmu.edu/~rmcclana/

PICK OF THE BUNCH

NetLookout

To save you the hassle of manually checking to see whether a Web site has been updated, try NetLookout which will keep an eye on Web sites and FTP servers, and as soon as anything changes it will let you know. The software is easy to configure to ignore certain changes, or just monitor specific things. If NetLookout finds something you want to know about, it can display a message on your desktop, or play a sound.

Product:	NetLookout
Platform:	Win 3.x, 95
Download:	2.80Mb
Price:	$20
Contact:	http://www.bmtmicro.com/catalog/netlookout.html



NetLookout

NetLookout will watch Web, FTP and Gopher sites, and notify you if something has changed. You can specify how often you want a site to be checked, what to ignore when checking a site, and how you want to be notified when a site changes.

Version 2.00 introduces some big improvements over 1.00:

- much improved user interface
- HTTP Proxy support, including user name and password
- drag'n'drop support for creating new Lookouts
- importing Lookouts from a number of popular OS/2 and Windows Internet apps

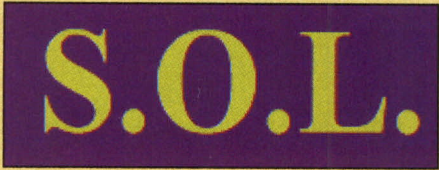
Order Information

File Name	[illegible] (OS/2 - 1.2 MB) [illegible] (Win95/NT - 2.6 MB)
Price	$20.00
Order With	Secure Order Form

S.O.L 898

It's not that we don't like AOL's Instant Messenger, but if you recently installed Netscape's Communicator or standalone Navigator 4.0, you'll have noticed that IM was included. Well, S.O.L. has been designed specifically for anyone who wants to choose their own messaging client – it'll completely wipe it from your hard drive. In fact, AOL's Instant Messenger isn't a bad little application – but you can decide that for yourself.

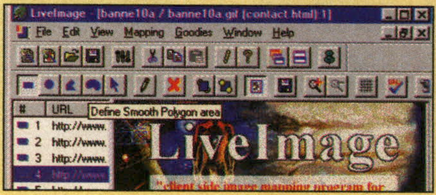
Product:	S.O.L 898
Platform:	Win 95, NT 3.51, NT 4
Download:	1.20Mb
Price:	$5
Contact:	http://www.digitalrobotics.com/S.O.L..htm



LiveImage 1.29

Imagemaps often look a lot better on a page than using text links, or building separate linked images into one that resembles a whole. If you want to experiment with imagemaps on your site, give LiveImage a try. It's very user-friendly and creates client-side image maps with a minimum of fuss, quickly generating the HTML you need. The registered version has a feature that will create a simple, button-style imagemap menu to work with.

Product:	LiveImage 1.29
Platform:	Win 95, NT 4
Download:	1.40Mb
Price:	£29.95
Contact:	http://www.liveimage.com



LiveImage - [banne10a / banne10a.gif (contact.html) 1]
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Window
Help
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2 http://www.
3 http://www.
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- Unlimited E-mail Addresses
- Full CGI-BIN Directory

Prices from £100 to £200 per annum

Netalia Internet also provide Dial-Up services, with special terms for single user ISDN clients

Connections from £95.00 per year or £9.50 per month

0800 0740862

Netalia Internet Ltd. PO Box 17364, London, NW2 2WY
E-mail: sales@netalia.com
URL: http://www.netalia.com

Package prices include ALL Domain Name Registration Charges
All Prices Plus VAT
No Credit Card Surcharges

SERVICE PROVIDER DIRECTORY

Britain's most comprehensive service provider directory makes comparing prices and added extras a breeze. Just flick through and identify the provider that's right for you

WHAT DOES IT ALL MEAN?

The directory is easy to follow, but here's a key to explain what everything means:

ONLINE SERVICE PROVIDER
Check this column to see if the company offers its own online services in addition to the Internet.

COVERAGE
Many companies offer local call rates all over the UK, but check this column just to make sure.

£ SET-UP
The price you will be charged as a one-off setting up fee.

£ PER MONTH
Prices vary quite widely, but remember that cheaper doesn't necessarily mean better.

£ PER YEAR
If you pay annually you will find you often get a lower rate, but you may be committed to staying with that ISP for the whole year. Decisions, decisions…

INCLUDED HOURS PER MONTH
Some firms allow you unlimited Internet access for a fixed monthly fee. Others may limit your online time in return for a cheaper rate.

EXTRA COST PER HOUR
If you are not getting unlimited access then check to see how much each extra hour will cost you. Try to estimate your online time carefully to avoid any nasty surprises.

TELEPHONE SUPPORT
If you are going to be using the Net a lot in the evenings, you'll be tearing your hair out if the support line is only open from 9am to 5pm. If you will only be using it during business hours then this may not cause a problem.

MAXIMUM MODEM SPEED IN KBPS
How fast are the service provider's modems? Make sure that you look for a provider that uses modems which are at least as fast as the one you have.

USERS PER MODEM
Don't share your ISP's modems with too many people, or you might get caught up in the jams.

BANDWIDTH
This refers to the amount of data that can be sent through a communications circuit in a given time. This gives you a rough idea of the speed you might get through the provider. A higher bandwidth is good, but even high bandwidth is not a total guarantee of faster Internet access.

FREE EMAIL ADDRESSES
How many email addresses do you need? Perhaps you want one for social mail and one for business, or a few for your family to use. Many providers offer additional addresses at a price, but some offer a reasonable number free, while others let different people use the same account.

FREE WEB SPACE
This depends on whether you want to upload your own home page and how large it is likely to be.

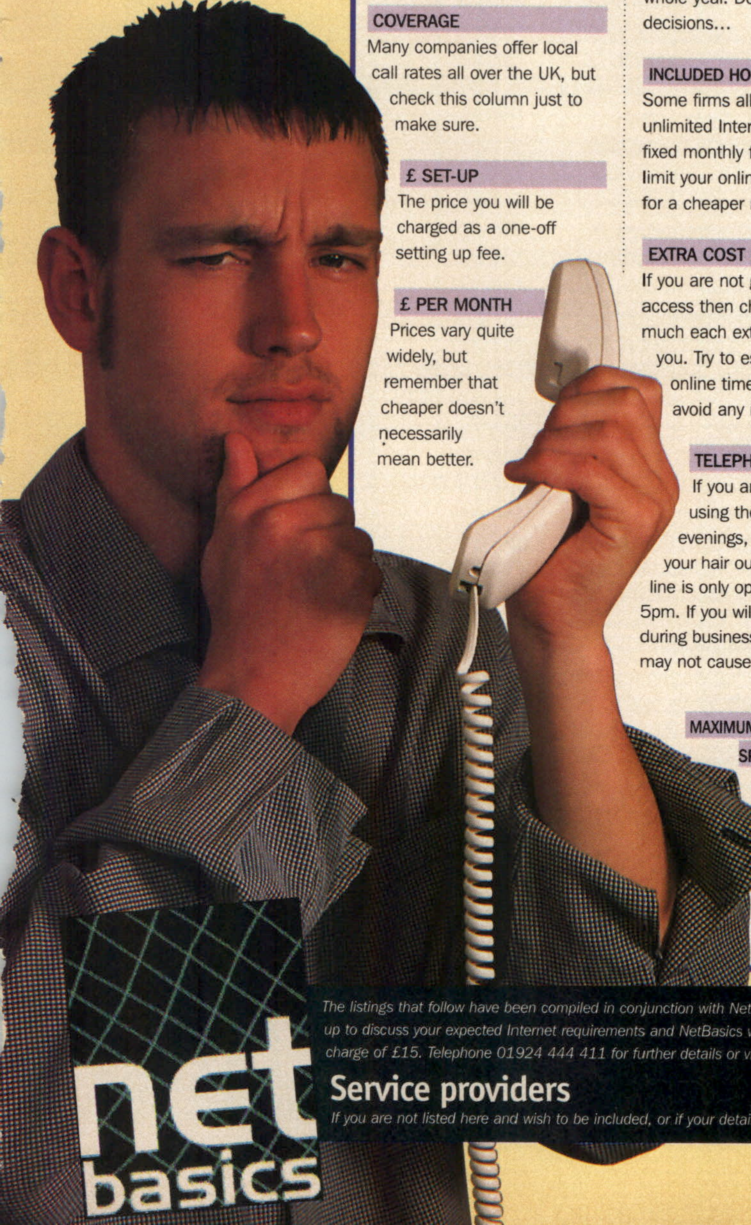
If you need more space than you get free, you can then purchase extra. Some providers do provide you with unlimited space.

ISDN AVAILABILITY
ISDN is a digital alternative to analogue phone lines, and offers faster connection times. It's probably only of interest if you are using the Net for business, but could be worth keeping an eye on in the future if ISDN prices come down. This only shows whether the provider offers ISDN access – call to check whether it will cost you anything extra.

NEWSGROUP CENSORING
If you have children whom you are about to let loose on the Net, you may prefer to sign up with a company that monitors newsgroup content and filters out unsuitable groups. Alternatively, you can use a specialist Net filtering package, for example, CyberPatrol.

MACINTOSH SUPPORT
If you have a Mac and would like specialist installation software or technical support, look out for these Mac-friendly service providers.

STUDENT DISCOUNT
Using the Net for college research can get expensive, especially on a student grant, so check for possible discounts – more and more ISPs are giving one.



net basics

The listings that follow have been compiled in conjunction with NetBasics. The company offers guidance on choosing the provider that is most suitable for you. Simply phone up to discuss your expected Internet requirements and NetBasics will match your needs to the provider that offers the best solution for you. This service carries a one-off charge of £15. Telephone 01924 444 411 for further details or visit the Web site at http://www.netbasics.com/.

Service providers

If you are not listed here and wish to be included, or if your details have changed, please email NetBasics at listings@netbasics.com.

● DENOTES ONLINE SERVICE PROVIDER	PROVIDER NAME	TELEPHONE	WEB ADDRESS	EMAIL ADDRESS	COVERAGE	£ SET-UP	£ PER MONTH
●	1st Solution Internet	01344 761350	www.1st-solution.co.uk	sales@1st-solution.co.uk	call	£0.00	n/a
●	1Way	0117 9414141	www.1way.co.uk	sales@1way.co.uk	National	£0.00	£11.75
	AAP InterNet	0181 4271166	www.aapi.co.uk	sales@aapi.co.uk	National	£11.75	£12.91
●	Abbotsbury Software Ltd	01305 871543	www.wdi.co.uk	karl@wdi.co.uk	National 0845	£25.00	n/a
	Abel Internet	0131 4455555	www.abel.net.uk	sales@abel.net.uk	National	£0.00	£11.16
	Abling.Co.Uk Ltd	01823 353771	www.abling.co.uk	info@abling.co.uk	National	£0.00	£15.00
	ACE Ltd	01670 528204	www.ace.co.uk	info@ace.co.uk	National 0845	£29.38	£11.75
	ACGNET	0171 3779114	www.acgnet.co.uk	sales@acgnet.co.uk	National	£15.00	£11.75
	Adept	01843 850444	www.adept.co.uk	sales@adept.co.uk	South East & Kent	£0.00	£11.75
●	AIC-Entanet	01279 865290	www.aic.co.uk/entanet	entanet@aic.co.uk	National	£17.63	£10.58
	Airtime Internet Resources	01254 676921	www.airtime.co.uk	sales@airtime.co.uk	National	£23.50	£15.27
●	Amity Internet	0500 200171	www.amity.co.uk	info@amity.co.uk	National	£0.00	£11.63
	Andover Online	01264 334822	www.andover.co.uk	sales@andover.co.uk	01264	£15.00	£12.00
	AngliaNet Limited	01473 211922	www.anglianet.co.uk	sales@anglianet.co.uk	Anglia	£17.63	£11.75
●	AOL	0800 2791234	www.aol.com	queryuk@aol.com	National	£0.00	£5.95
	Argonet	0500 585586	www.argonet.co.uk	info@argonet.co.uk	National 0645	£0.00	£14.69
	Intensive Networks Ltd	01672 511054	www.intensive.net	sales@intensive.net	National	£0.00	£11.75
	Astra Internet	0800 0182001	www.astra.co.uk	sales@astra.co.uk	National	£17.63	£12.93
	Atlas Internet	0171 3120400	www.atlas.co.uk	info@atlas.co.uk	National	£29.38	£14.10
	Aviators Network	01727 868468	www.avnet.co.uk	info@avnet.co.uk	National	£11.69	£11.75
	Baynet Internet Services	01222 256401	www.baynet.co.uk	enq@baynet.co.uk	National 0845	£23.50	£14.10
●	Beacon Internet Services	01749 831056	www.thebeacon.co.uk	sales@thebeacon.co.uk	National 0645	£25.00	£10.00
	BOGOMIP	0800 137536	www.bogo.co.uk	info@bogo.co.uk	National	£29.38	£14.10
●	BOOTS Internet	01462 743112	www.boots.com	support@boots.com	National	£10.00	£12.75
	Bournemouth Internet	01202 292900	www.bournemouth-net.co.uk	sales@bournemouth-net.co.uk	01202 and Bordering	£25.00	£10.00
●	Brunel Internet	01922 59890	www.brunel.co.uk	sales@brunel.co.uk	National	£0.00	n/a
	BT Internet	0800 800001	www.btinternet.com	support@btinternet.com	National	£0.00	£11.75
	BusinessNet	0171 3909933	www.business.net.uk	sales@business.net.uk	National	n/a	n/a
●	Cable & Wireless Communications	0500 200980	www.cwcom.net	sales@mcmail.com	National	£10.00	£10.00
	Cable Internet	0500 541542	www.cableinet.co.uk	sales@cableinet.co.uk	75% UK	£0.00	£9.98
●	Cable Online	0800 506506	www.cableol.net	custops@cableol.net	National	£0.00	£9.95
	CableNet	01424 830900	www.cablenet.net	info@cablenet.net	National	£0.00	£9.95
	Capethorn	0990 168160	www.pobox.co.uk	andrew@pobox.co.uk	National	£0.00	n/a
	Cerbernet	0171 3608000	www.cerbernet.co.uk	sales@cerbernet.co.uk	National	£29.38	n/a
	Charis Internet Services	0121 2485800	www.charis.net	enquiries@charis.net	National	£0.00	£11.75
	City NetGates Ltd	0117 9074000	www.netgates.co.uk	sales@netgates.co.uk	National 0845	£0.00	n/a
	CityScape	01223 566950	www.cityscape.co.uk	sales@cityscape.co.uk	National	£29.38	£17.63
	Cityway Internet	0181 9306666	www.cityway.com	info@cityway.com	National	£17.63	£11.69
●	CIX	0845 3555050	www.cix.co.uk	sales@cix.co.uk	National 0845	£0.00	£7.34
	ClaraNET Ltd	0800 3582828	www.clara.net	info@clara.net	National	£0.00	£11.63
	Cocoon Internet Services	0171 3738461	www.cocoon.co.uk	admin@cocoon.co.uk	National	£0.00	£14.10
	Colloquium	0500 008543	www.colloquium.co.uk	sales@colloquium.co.uk	National	£0.00	£14.10
●	ComeNet Technology Ltd	0181 3579111	www.come.net.uk	sales@come.net.uk	London Area	£9.40	n/a
●	CompuServe Information Services (UK) Ltd	0990 000200	world.compuserve.com	70006.101@compuserve.com	National	£0.00	£6.50
●	Connect 2 Internet	0800 4960777	www.connect-2.net	penny@connect-2.net	National	£0.00	£11.74
	Creative Online Media	01232 370124	www.globalgateway.com	john@globalgateway.com	National	£11.69	£17.57
	Cybase Ltd	0151 2274244	www.cybase.co.uk	sales@cybase.co.uk	National	£0.00	£11.75
●	Cyber Ware Ltd.	01733 765050	www.cyberware.co.uk	mail@cyberware.co.uk	National 0845	£15.00	£14.69
	CYBERphile Internet	01543 454840	www.cyberphile.co.uk	info@cyberphile.co.uk	National	£0.00	£11.74
	Cyberscape	01253 724000	www.cyberscape.net	sales@cyberscape.net	National	£17.63	£14.10
	Cygnet Internet Services Ltd	0181 8804650	www.cygnet.co.uk	info@cygnet.co.uk	Greater London	£17.63	£11.75
	Data Link Internet	01522 681100	www.data-link.net	sales@data-link.net	National	n/a	n/a
	Datanet International	01252 810081	www.data.net.uk	info@data.net.uk	National	£23.50	£17.63
	Demon Internet	0181 3711234	www.demon.net	sales@demon.net	National	£14.69	£11.75

RING RING... RING RING...

£ PER YEAR	HRS PER MONTH INC	COST PER HOUR EXTRA	TELEPHONE SUPPORT	MAX MODEM SPEED	USERS PER MODEM	BANDWIDTH	EMAIL ADDRESSES INC	WEB SPACE INC (Mb)	ISDN AVAILABILITY	NEWSGROUP CENSORING	MACINTOSH SUPPORT	STUDENT DISCOUNT
£141.00	unlimited	£0.00	9-6 M-F	33.6	<10	n/a	1	5	Yes	No	Yes	No
£141.00	unlimited	£0.00	10-6 M-F	56(X2)	20	16Mbps	1	unlimited	Yes	No	Yes	No
£133.95	unlimited	£0.00	10-7 M-F 2-6 Sa-Su	33.6	10	4Mbps	3	5	Yes	No	Yes	No
£176.25	unlimited	£0.00	8-6 M-F 8.30-3.30 Sa	33.6	<10	128Kbps	1	0.5	Yes	Yes	Yes	Yes
£105.72	unlimited	£0.00	9-11 7 days	56(X2/V90)	<10	On Demand	unlimited	10	Yes	Yes	Yes	No
£150.00	unlimited	£0.00	9-8 M-F Sat 9-8 Sa	56(X2)	10	128Kbps	1	10	Yes	No	Yes	No
£141.00	unlimited	£0.00	9-5 M-F	33.6	25	4Mbps	1	0	Yes	Yes	Yes	No
n/a	unlimited	£0.00	9-6 M-F	56(Flex)	12	20Mbps	1	call	Yes	No	Yes	Yes
£117.50	unlimited	£0.00	9-5 M-F	56(v.90)	<10	2Mbps	1	1	Yes	Yes	Yes	No
£105.75	unlimited	£0.00	9-9 M-F	56(X2)	<10	n/a	10	5	Yes	No	Yes	Yes
£183.30	unlimited	£0.00	9-5 M-F	33.6	20	2Mbps	1	1	Yes	Yes	Yes	No
£116.33	unlimited	£0.00	8-11 M-F 10-11 Sa-Su	56(Flex)	<10	2Mbps	4	5	Yes	No	Yes	Yes
£120.00	unlimited	£0.00	9-6 M-F 9-5.30 Sa	33.6	15	64Kbps	1	5	No	No	Yes	No
£117.50	unlimited	£0.00	8-9 M-F 8-9 Sa 11-7 Su	33.6	<10	2Mbps	1	1	Yes	No	Yes	No
n/a	3	£1.85	8-10.30 M-F 9-5.30 Sa	33.6	n/a	n/a	5	10	No	No	No	No
£141.00	unlimited	£0.00	10-5 M-F 10-5 Sa	56	18	128Kbps	5	5	Yes	Yes	Yes	No
£129.25	unlimited	£0.00	9-7 M-F 9-5 Sa	56(Flex)	n/a	n/a	1	2	Yes	Yes	No	No
£141.00	unlimited	£0.00	9-5 M-F	28.8	n/a	n/a	unlimited	5	Yes	No	Yes	No
£169.20	unlimited	£0.00	10-8 M-F 10-4 Sa-Su	56(Flex/X2)	16	2Mbps	1	0	Yes	Yes	Yes	No
£117.50	unlimited	£0.00	9-9 M-F	33.6	15	2Mbps	2	unlimited	Yes	Yes	Yes	No
£144.00	unlimited	£0.00	8-7.30 M-F	33.6	10	256Kbps	1	1	Yes	Yes	Yes	Yes
£108.00	unlimited	£0.00	24hrs 7days	56(Flex)	<10	2Mbps	1	2	Yes	Yes	Yes	No
£135.36	unlimited	£0.00	9-9 M-F 10-8 Sa-Su 10-5	33.6	15	n/a	2	5	Yes	Yes	Yes	No
£153.00	unlimited	£0.00	10-9 M-F	56(Flex)	10	2Mbps	1	unlimited	Yes	No	Yes	No
n/a	unlimited	£0.00	8.30-6 M-F	56(Flex)	12	2Mbps	1	5	Yes	No	Yes	No
£423.00	unlimited	£0.00	9-6 M-F 10-4 Sa-Su	33.6	15	256Kbps	3	1	Yes	Yes	Yes	No
£129.75	unlimited	£0.00	24 Hrs 7days	56(Flex/X2)	n/a	n/a	5	10	Yes	Yes	Yes	No
n/a	n/a	n/a	24 Hrs 7days	n/a	n/a	155Mbps+	n/a	n/a	Yes	Yes	n/a	No
n/a	unlimited	£0.00	24 Hrs 7days	56(Flex/v.90)	10	n/a	5	5	No	Yes	No	Yes
£119.76	unlimited	£0.00	9-9 7days	56(X2)	10	45Mbps	5	5	Yes	No	Yes	Yes
£119.40	unlimited	£0.00	24hrs 7days	56(Flex/X2)	10	n/a	1	5	Yes	Yes	No	No
£119.40	unlimited	£0.00	9-8 M-F 10-4 Sa	56(Flex)	14	64Kbps	unlimited	5	Yes	No	Yes	No
£120.00	unlimited	£0.00	9-5 M-F	28.8	15	512Kbps	1	3	Yes	No	Yes	No
£144.00	unlimited	£0.00	24hrs 7days	28.8	10	10Mbps	1	0	Yes	No	Yes	No
£141.00	unlimited	£0.00	8-7 M-F	56(X2)	n/a	n/a	5	2	Yes	Yes	Yes	No
£99.00	unlimited	£0.00	9-9 M-F 9-5 Sa	56(Flex)	10	2e1lines	5	3	Yes	No	Yes	No
£211.56	unlimited	£0.00	24hrs 7days	28.8	20	64Kbps	1	6.5	Yes	No	Yes	No
£140.30	unlimited	£0.00	9-5 M-F	33.6	n/a	64Kbps +12	1	10	No	No	Yes	No
n/a	approx 2.5	£2.40/£3.60	9-Midnight M-F 12-6 Sa	56(X2)	n/a	n/a	unlimited	5	Yes	No	Yes	No
£116.33	unlimited	£0.00	24hrs 7days	56(Flex/X2)	15	100Mbps	unlimited	25	Yes	No	Yes	No
£169.20	unlimited	£0.00	9-7 M-F 10-7 Sa-Su	56(Flex)	n/a	45Mbps	5	5	No	No	Yes	No
£169.20	unlimited	£0.00	24hrs 7days	33.6	17	192Kbps	1	3	Yes	No	Yes	No
£129.25	unlimited	£0.00	8-9 M-F 9-5 Sa	56(Flex)	<10	2Mbps	2	10	Yes	No	Yes	No
n/a	5	£1.95	8-12 7days	33.6	n/a	n/a	1	5	Yes	Yes	Yes	No
£98.56	unlimited	£0.00	9-7 M-Sa	56(Flex)	n/a	n/a	unlimited	5	Yes	No	No	No
£210.84	unlimited	£0.00	9-9 M-F 9-6 Sa	28.8	n/a	128Kbps	1	0	Yes	No	Yes	No
£117.50	unlimited	£0.00	9-5 M-F 10-4 Sa	56(X2)	15	2Mbps	1	5	Yes	Yes	Yes	Yes
£146.88	unlimited	£0.00	9-12 7days	56	11	2Mb	4	5	Yes	No	Yes	No
£129.75	unlimited	£0.00	8.30-6.00 M-F	33.6	12	5Mbps	1	0.1	Yes	No	Yes	No
£141.00	unlimited	£0.00	10-6 7days	28.8	10	128Kbps	1	1	Yes	No	Yes	No
£117.50	unlimited	£0.00	9.30-7 M-F 10-4 Sa	33.6	10	1Mbps	5	5	Yes	No	Yes	No
n/a	n/a	n/a	9-6 M-F	n/a	n/a	n/a	n/a	n/a	Yes	No	Yes	No
£176.25	unlimited	£0.00	24 Hrs 7days	33.6	<15	10Mbps	unlimited	1	Yes	No	Yes	No
£141.00	unlimited	£0.00	24hrs 7days	33.6	n/a	n/a	unlimited	5	Yes	No	Yes	No

RING RING... RING RING...

● DENOTES ONLINE SERVICE PROVIDER	PROVIDER NAME	TELEPHONE	WEB ADDRESS	EMAIL ADDRESS	COVERAGE	£ SET-UP	£ PER MONTH
●	DIALnet PLC	0990 665665	www.dialnet.co.uk	sales@dialnet.co.uk	National	£0.00	£11.75
	Diamond Cable Communications	0800 003005	www.diamond.co.uk	info@diamond.co.uk	Leicestershire, Notts & Lincs	£11.49	£11.49
	Direct Connection	0800 0720000	www.dircon.net	sales@dircon.net	National 0845	£0.00	£13.50
	Direct Net @ccess	01232 201555	www@d-n-a.net	info@d-n-a.net	National	£11.75	£8.82
	Discovery	01203 364400	www.discover.co.uk	invent@discover.co.uk	Coventry	£29.38	£11.75
	Dolphin Internet Services	0181 9325000	www.dolphinet.co.uk	info@dolphinet.co.uk	London SE	£14.10	£14.10
	Dorset Internet	01202 659991	www.lds.co.uk	sales@lds.co.uk	National 0645	£19.99	£14.99
	Easinet Ltd	0115 9469930	www.easinet.co.uk	sales@easinet.co.uk	0115 01332 01636	£0.00	£17.63
●	Easynet Ltd	0171 6814444	www.easynet.net	postbox@easynet.net	National	£0.00	£11.99
●	Eclipse Networking Limited	01392 202345	www.eclipse.co.uk	sales@eclipse.co.uk	National/SW	£0.00	£9.40
	Ecosse Telecoms	0800 0267092	www.ecossetel.co.uk	netsales@ecossetel.co.uk	National	£0.00	£9.99
●	edNET	0131 4667003	www.ednet.co.uk	info@ednet.co.uk	0131 01506	£0.00	£11.75
●	Enablis	0800 607608	www.enablis.net	sales@enablis.net	National	£0.00	£11.75
●	Entanet	0500 368263	www.enta.net	info@enta.net	National 0845	£25.00	£10.58
	Enterprise plc	01624 677666	www.enterprise.net	sales@enterprise.net	National 0345	£0.00	£11.75
	EntWeb	0800 525470	www.entweb.co.uk	info@entweb.co.uk	National 0845	£0.00	£11.67
●	Epinet Data Networks	01242 821000	www.epinet.co.uk	info@epinet.co.uk	National 0845	£0.00	n/a
	Exconet	01268 453000	www.exconet.co.uk	sales@exconet.co.uk	National 0845	£0.00	£11.75
	ExNet	0181 2965577	www.exnet.com	info@exnet.com	London 0181	£0.00	£14.10
	FeNETre	01538 398298	www.fenetre.co.uk	sales@fenetre.co.uk	Staffs Ches Derbs	£0.00	£9.40
	FlexNet	01638 711550	www.flexnet.co.uk	info@flexnet.co.uk	01638 01473 01159	£15.00	£11.75
	Foobar Internet	0116 2330033	www.foobar.net	sales@foobar.net	Leicester 0116	£14.69	£11.75
	Force9	0800 0737800	www.force9.net	sales@force9.net	National	£0.00	£9.99
	Fourth Level / Cybercity	0117 9854455	www.flevel.co.uk	sales@flevel.co.uk	National	£17.63	£11.75
●	Freedom2surf	0181 8812111	www.freedom2surf.net	sales@freedom2surf.net	National	£0.00	£11.75
	Free.Net (2 Years Subscription)	0181 5683377	www.thefree.net	info@thefree.net	National	£0.00	n/a
	Frontier Internet Services	0171 5369090	www.ftech.net	info@ftech.net	National	£25.00	n/a
	Genesis Project Ltd	0500 822404	www.gpl.net	sales@gpl.net	Northern Ireland	£35.25	£11.75
	Gifford Internet Services	0117 9397722	www.gifford.co.uk	admin@gifford.co.uk	Bristol 0117	£0.00	£9.99
	Global Internet Ltd	0870 9098043	www.global.net.uk	info@global.net.uk	National	£11.75	£11.75
●	GMTnet Ltd	01509 269999	www.gmtnet.co.uk	sales@gmtnet.co.uk	01509 01132 01159 0181 0171	£0.00	£11.75
	GreenNet	0171 7131941	www.gn.apc.org	support@gn.apc.org	National 0645	£25.00	£13.50
●	Griffin Internet	01332 606160	www.griffin.co.uk	info@griffin.co.uk	East Midlands	£8.81	£14.69
	GX Networks	0181 9571250	www.gxn.net	enquiries@gxn.net	National	n/a	n/a
	Hi-Net	0181 5326532	www.hi-net.co.uk	hi-net@higrade.com	National	£0.00	£11.75
●	Hiway	01635 573300	www.hiway.co.uk	info@inform.hiway.co.uk	National	£17.63	£17.63
	I-Way Limited	0118 9580058	www.I-way.net.uk	info@I-way.net.uk	0118 01865 01666 0181 0171	£0.00	n/a
	IBM Global Network	0800 973000	www.ibm.net	internet_europe@ie.ibm.com	National	£0.00	£15.00
●	IFB	01224 333300	www.ifb.net	info@ifb.net	National	£23.50	£14.69
●	Infotrade	0800 226600	www.infotrade.co.uk	enquiries@infotrade.co.uk	National 0345	£0.00	n/a
●	Insight-Media Communications Ltd	01942 209696	www.insight-media.co.uk	info@insight-media.co.uk	North West	£0.00	£14.10
	Inter-Computer Technology Ltd	0171 4869601	www.inctech.com	sales@inctech.com	Greater London	£18.18	£18.18
	InterAct	01753 776699	www.uv.net	sysop@uv.net	01753 London Area	£0.00	£4.00
	Interalpha	01703 363200	www.interalpha.net	enquiry@interalpha.co.uk	01705 01703	£23.00	£17.62
	InteResource Ltd	0171 6008820	www.interesource.co.uk	jsl@interesource.co.uk	National	£11.75	£17.57
	Internet Central	01270 611000	www.netcentral.co.uk	sales@netcentral.co.uk	National	£0.00	£11.75
●	Internet Discovery	0181 6942240	www.idiscover.co.uk	sales@idiscover.co.uk	National	£12.50	£15.00
	Internet Network Services	0800 467638	www.insnet.net	info@insnet.net	National	n/a	n/a
●	Internet Solutions for Business	01203 633177	www.business-solutions.net	sales@is4b.net	National	£0.00	n/a
	IntoNet Ltd	0181 9419195	www.intonet.co.uk	hq@intonet.co.uk	National	£20.00	£10.00
	Ireland On-Line	00353 18551739	www.iol.ie	sales@iol.ie	Ireland	£29.38	£11.75
	ISPC	01628 639595	www.ispc.net	barryr@ispc.net	National	n/a	n/a
	k-WEB	0500 751111	www.k-web.co.uk	info@helpdesk.k-web.co.uk	National	£11.75	£11.69
	Karoo	01482 602742	www.karoo.net	info@karoo.net	National 0845	£0.00	£9.79

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£ PER YEAR	HRS PER MONTH INC	COST PER HOUR EXTRA	TELEPHONE SUPPORT	MAX MODEM SPEED	USERS PER MODEM	BANDWIDTH	EMAIL ADDRESSES INC	WEB SPACE INC (Mb)	ISDN AVAILABILITY	NEWSGROUP CENSORING	MACINTOSH SUPPORT	STUDENT DISCOUNT
£141.00	unlimited	£0.00	24hrs 7days	56(X2)	<10	n/a	5	5	Yes	Yes	No	No
£137.88	unlimited	£0.00	24hrs 7days	56(X2/Flex)	12	2Mbps	5	5	Yes	Yes	No	No
£117.50	unlimited	£0.00	9-9 M-F 10-5 Sa-Su	56(Flex)	10	n/a	unlimited	20	Yes	No	Yes	No
£105.75	unlimited	£0.00	9-6 M-Sa	56(Flex)	12	2Mbps	3	10	Yes	No	Yes	No
£141.00	unlimited	£0.00	8.30-5 M-F	28.8	10	64Kbps	1	0	Yes	No	Yes	No
£141.00	unlimited	£0.00	24hrs 7days	33.6	10	64Kbps	1	5	No	No	No	No
£149.00	unlimited	£0.00	24hrs 7days	56	10	448Kbps	2	5	Yes	No	Yes	No
n/a	unlimited	£0.00	8-8 M-F	56	n/a	128Kbps	3	5	Yes	No	Yes	No
£129.99	unlimited	£0.00	24hrs 7days	56(Flex)	20	n/a	unlimited	unlimited	Yes	Yes	Yes	No
£112.80	unlimited	£0.00	9-8 M-F	56(Flex/X2)	10	256Kbps	5	10	Yes	Yes	Yes	No
n/a	unlimited	£0.00	9-5.30 M-F	56(Flex/X2)	n/a	n/a	2	2	Yes	No	Yes	No
£117.50	unlimited	£0.00	9-8 M-F 10-4 Sa	56(Flex)	10	256Kbps	1	1	Yes	No	Yes	No
£141.00	unlimited	£0.00	24 Hrs 7days	56	10	n/a	5	2	Yes	Yes	No	No
£105.75	unlimited	£0.00	24hrs 7days	56(X2/v.90)	<10	4Mbps	unlimited	20	Yes	No	Yes	Yes
£117.50	unlimited	£0.00	9-10 M-F 10-4 Sa-Su	56(Flex)	17	8Mbps	unlimited	5	Yes	No	Yes	No
£117.50	unlimited	£0.00	8-10.30 M-F 10-6 Sa 10-4 Su	56(Flex/X2)	n/a	n/a	5	5	Yes	No	Yes	Yes
£116.00	unlimited	£0.00	9-8 M-F	33.6	<10	2Mbps	1	5	Yes	No	Yes	No
£141.00	unlimited	£0.00	9-10 M-F 10.30-6 Sa-Su	33.6	<10	128Kbps	1	5	Yes	No	No	No
£152.75	unlimited	£0.00	10-6 M-F	28.8	<10	64Kbps	1	1	Yes	No	Yes	No
£112.80	unlimited	£0.00	8.30-7 M-F 9-5 Sa	33.6	10	2Mbps	1	1	Yes	No	Yes	No
£117.50	unlimited	£0.00	11-9 M-F 10-5 Sa	33.6	n/a	256Kbps	unlimited	2	Yes	No	Yes	No
£117.50	unlimited	£0.00	9-5 M-F	33.6	10	n/a	1	0.5	Yes	No	Yes	No
£98.70	unlimited	£0.00	7-11 7days	56(Flex/X2/v.90)	15	4Mbps	unlimited	15	Yes	No	Yes	No
£135.13	unlimited	£0.00	9-5.30 M-F	33.6	n/a	n/a	1	0.1	Yes	No	No	Yes
£141.00	unlimited	£0.00	9.30-5.30 M-F	56(Flex)	<10	10Mbps	5	5	Yes	No	Yes	Yes
£30.00	unlimited	£0.00	9-6 M-F	56(Flex)	10	155Mbps	unlimited (99p p/wk)	n/a	No	No	Yes	No
£120.00	unlimited	£0.00	9-7 M-F 12-6 Sa	56(Flex)	17	140Mbps	call	call	Yes	Yes	Yes	No
£105.75	unlimited	£0.00	8 onwards M-F	33.6	18	256Kbps	1	0	Yes	Yes	Yes	No
£107.89	unlimited	£0.00	10-9 M-F 12-8 Sa-Su	33.6	15	128Kbps	3	2	No	Yes	Yes	No
£105.75	unlimited	£0.00	9-9 M-F 10-6 Sa-Su	56(Flex/X2)	<20	10Mbps	unlimited	3	Yes	No	Yes	No
£117.50	unlimited	£0.00	9-6 M-F	33.6	15	64Kbps	2	2	Yes	No	Yes	Yes
£135.00	unlimited	£0.00	10-6 M-F	33.6	n/a	128Kbps	1	0	No	Yes	Yes	Yes
£127.66	unlimited	£0.00	10-7 M-F	33.6	<10	n/a	5	5	No	No	Yes	No
n/a	unlimited	£0.00	24hrs 7days	n/a	n/a	n/a	n/a	n/a	Yes	No	Yes	No
£141.00	unlimited	£0.00	24hrs 7days	33.6	25	155Mbps	unlimited	10	Yes	No	No	No
£176.25	unlimited	£0.00	8.30-7 M-F	56(Flex/X2)	10	10Mbps	5	call	Yes	No	Yes	No
£100.00	unlimited	£0.00	8-7 M-F	33.6	10	2Mbps	1	0	Yes	Yes	Yes	No
£180.00	unlimited	£0.00	24hrs 7days	33.6	n/a	n/a	1	0	Yes	No	Yes	No
£146.88	unlimited	£0.00	9-6 M-F	56(Flex)	11	2Mbps	1	1	Yes	No	Yes	No
£69.88	unlimited	£0.00	10-8 M-F 10-2 Sa	56(Flex/X2)	n/a	2Mbps	1	3	Yes	No	No	No
£141.00	unlimited	£0.00	8-8 M-F 10-6 Sa-Su	33.6	<10	n/a	4	unlimited	Yes	Yes	Yes	Yes
£176.25	unlimited	£0.00	10-5 M-F	28.8	<10	n/a	1	0	Yes	No	Yes	No
n/a	14	£0.00	24hrs 7days	28.8	<10	128Kbps	1	unlimited	No	No	Yes	No
£193.86	unlimited	£0.00	9-5 M-F	33.6	16	n/a	1	2	No	No	Yes	No
£193.82	unlimited	£0.00	8-9 M-F 9-6 Sa	33.6	n/a	n/a	5	0	Yes	No	Yes	No
£117.50	unlimited	£0.00	9-6 M-F 9.30-6 Sa	56	n/a	On Demand	5	2	Yes	No	Yes	No
£180.00	unlimited	£0.00	9-9 M-F 10-6 Sa-Su	56(Flex/X2)	15	4Mbps	10	0	Yes	No	Yes	No
n/a	unlimited	£0.00	9-6 M-F	n/a	n/a	155Mbps	n/a	call	Yes	No	Yes	No
£100.00	unlimited	£0.00	call	56 (Flex/X2)	<10	24Mbps	call	call	Yes	No	Yes	No
£100.00	unlimited	£0.00	8-8 M-Sa	33.6	12	2Mbps	1	1	Yes	No	Yes	No
£117.50	unlimited	£0.00	9-9 7days	28.8	10	T1	1	5	Yes	No	Yes	No
n/a	n/a	n/a	9-9 7days	n/a	n/a	2Mbps	n/a	n/a	n/a	No	n/a	No
£129.25	unlimited	£0.00	24hrs 7days	33.6	25	100Mbps ATM	unlimited	10	Yes	Yes	Yes	No
£117.48	unlimited	£0.00	24hrs 7days	33.6(call)	25	10Mbps	unlimited	call	Yes	Yes	Yes	No

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● DENOTES ONLINE SERVICE PROVIDER	PROVIDER NAME	TELEPHONE	WEB ADDRESS	EMAIL ADDRESS	COVERAGE	£ SET-UP	£ PER MONTH
	KBnet	01234 402020	www.kbnet.co.uk	sales@kbnet.co.uk	01234	£23.00	£12.93
	Ke-Connect Internet Services	07000 668436	www.keme.co.uk	info@keme.net	South East Anglia	£17.63	£9.40
	KENTnet Internet Services	01622 844801	www.kentnet.co.uk	sales@kentnet.co.uk	Kent 01622 01580 01892	£0.00	£11.75
	LarkNet	01638 716423	www.larknet.co.uk	info@larknet.co.uk	National	£0.00	£11.75
	LDS Technology	01202 659991	www.lds.co.uk	sales@lds.co.uk	National	£19.99	£14.99
●	LineOne	0800 111210	www.lineone.net	enquiries@lineone.net	National 0345	£0.00	£4.95
	London Web Communications Ltd	0181 3494500	www.londonweb.net	contact@londonweb.net	National	£17.63	£14.68
	Luna Internet	01782 855655	www.luna.co.uk	john@luna.co.uk	National	£11.75	£11.75
	MacLine	0181 4011111	www.macline.co.uk	orders@macline.co.uk	85% UK	£29.38	£14.00
	Madhouse Net	0800 0748283	www.madhouse.uk.com	info@madhouse.uk.com	National	£0.00	£11.75
●	Maidenet	01628 825757	www.maidenet.co.uk	guy@maidenet.co.uk	National	£25.00	£15.00
●	Manx Computer Bureau (MANNET)	01624 623841	www.mcb.net	postmaster@mcb.net	National	£23.50	£9.40
	Mercia Internet Ltd	01827 69166	www.mercia.net	sales@mercia.net	National	£0.00	£11.50
	Mistral Internet	01273 747432	www.mistral.co.uk	info@mistral.co.uk	National 0345	£0.00	£9.99
	Moonlight Internet	01276 856868	www.moon-light.co.uk	sales@moon-light.co.uk	National	£0.00	£14.95
●	Moose	0181 9506633	www.moose.co.uk	info@moose.co.uk	01923 0181	£0.00	£11.75
●	MSN	0345 002000	www.msn.com	ukweb@microsoft-contact.co.uk	National	£0.00	£14.95
●	Multimedia Machine Ltd	01204 363688	www.mmm.co.uk	sales@mmm.co.uk	National	£0.00	n/a
	Net Online	0171 4477447	www.nol.co.uk	sales@nol.co.uk	National	£0.00	£9.99
	NETCHANNEL	0171 5917000	www.netchannel.co.uk	info@netchannel.co.uk	National	£0.00	£14.95
	Netcom	0870 5668008	www.netcom.net.uk	sales@corp.netcom.net.uk	National	£0.00	£14.95
	NetDirect Internet	0800 7313311	www.netdirect.net.uk	info@netdirect.net.uk	National	£0.00	£10.56
	NetKonect Communcations Ltd	01420 542777	www.netkonect.net	info@netkonect.net	National	£0.00	£11.75
	Netmania Ltd	0181 2521199	www.netmania.co.uk	info@netmania.co.uk	0181	£0.00	n/a
	NetMatters	0345 573377	www.netmatters.co.uk	info@netmatters.co.uk	National	£14.10	£11.75
●	NewNet Limited	01705 647400	www.newnet.co.uk/home	sales@newnet.co.uk	National	£0.00	£12.99
	Nildram	0800 0720400	www.nildram.co.uk	sales@nildram.co.uk	National 0845	£0.00	£11.75
	North West Net	0161 9507777	www.nwnet.co.uk	sales@nwnet.co.uk	Manchester Stoke	£23.50	£10.00
	Northants Computer Centre	01604 622539	www.nccnet.co.uk	sales@nccnet.co.uk	01604 01933 01234 01327 01536	£0.00	£11.75
	On-line	0181 5586114	www.on-line.co.uk	sysop@mail.on-line.co.uk	National 0845	£0.00	n/a
	Onyx Internet	0345 715715	www.onyxnet.co.uk	sales@onyxnet.co.uk	National	£29.38	£11.75
	OrangeNet	0181 930 6270	www.orangenet.co.uk	sales@orangenet.co.uk	National	£0.00	n/a
●	Oxford CommUnity Internet plc	01865 856000	www.community.co.uk	info@community.co.uk	National 0845	£23.50	£14.69
●	Paradise Internet Network Services	01256 414863	www.pins.co.uk	sales@pins.co.uk	Southern England	£17.63	£9.40
	Paston Chase	01603 502061	www.paston.co.uk	sales@paston.co.uk	National	£17.63	n/a
●	Pavilion Internet plc	01273 607072	www.pavilion.net	sales@pavilion.net	National	£15.00	£12.55
	Pinnacle Internet	01293 613686	www.pncl.co.uk	info@pncl.co.uk	National	£41.13	£17.04
●	Pipemedia OnLine	01455 828218	www.pipemedia.co.uk	sales@pipemedia.net	National 0845	£0.00	£11.75
	Poptel	0171 9239465	www.poptel.net	info@poptel.net	National 0645	£17.63	£15.22
	Porthill Internet	0702 110 1200	www.porthill.com	sales@porthill.com	National 0845	£0.00	n/a
	Power Internet	01908 605188	www.powernet.com	info@powernet.co.uk	National 0845	£0.00	£14.10
	Powernet International	0500 011501	www.powernet-int.co.uk	sales@powernet-int.co.uk	National 0845	£41.13	£14.68
	Premiernet	01908 377707	www.premiernet.co.uk	info@home.premiernet.co.uk	National 0845	£0.00	£11.75
	Prestel On-line	0990 223300	www.prestel.co.uk	enquiry@netsales.prestel.co.uk	National 0845	£0.00	£10.56
	Primex	01908 643597	www.primex.co.uk	info@alpha.primex.co.uk	National 0845	£0.00	£11.75
	Pro-Net Internet Services	0181 2003565	www.pro-net.co.uk	sales@pro-net.co.uk	London 0181 0171	£0.00	n/a
●	PSINet UK Ltd	01223 577167	www.uk.psi.net	sales@uk.psi.com	National	£9.95	£14.95
●	RedNet	01494 511640	www.red.net	marketing@red.net	National 0345	£29.40	£17.60
	Relay	0345 369999	www.relay.co.uk	enquiries@relay.co.uk	National	£29.38	£11.75
●	Research Machines	01865 826868	www.rmplc.co.uk	sales@rmplc.co.uk	National 0845	£0.00	n/a
	Round One Media	01237 425100	www.rom.net	info@rom.net	Devon Cornwall	£23.50	£14.10
	SAQ Network Services	0800 801514	www.saqnet.co.uk	sales@saqnet.co.uk	National 0845	£10.00	£12.50
●	Sci-fi.net	01925 838007	www.sci-fi.net	admin@sci-fi.net	National	£30.00	£10.00
	Scotland Online	0800 0272027	www.scotland.net	sales@sol.co.uk	National 0845	£11.75	£11.75

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£ PER YEAR	HRS PER MONTH INC	COST PER HOUR EXTRA	TELEPHONE SUPPORT	MAX MODEM SPEED	USERS PER MODEM	BANDWIDTH	EMAIL ADDRESSES INC	WEB SPACE INC (Mb)	ISDN AVAILABILITY	NEWSGROUP CENSORING	MACINTOSH SUPPORT	STUDENT DISCOUNT
£164.50	unlimited	£0.00	8.30-8.30 M-Sa	33.6	20	128Kbps	1	0	No	No	Yes	Yes
£112.80	unlimited	£0.00	9-5.30 M-F	33.6	15	2Mbps	unlimited	2	No	No	Yes	Yes
£141.00	unlimited	£0.00	9-6 M-F	56(Flex/X2)	<10	128Kbps	5	5	No	No	Yes	No
£117.50	unlimited	£0.00	8-8 M-F 9-1 Sa	56(Flex/X2)	<10	768Kbps	unlimited	10	Yes	Yes	No	No
£149.00	unlimited	£0.00	24hrs 7days	56(X2)	10	448Kbps	call	5	Yes	No	Yes	No
n/a	3	£2.35	8-Midnight M-Sa 10-10 Su	56(Flex/X2)	n/a	n/a	5	10	Yes	No	Yes	No
£176.25	unlimited	£0.00	9-9 M-Sa	56(Flex)	<10	2Mbps	3	5	Yes	No	Yes	Yes
£117.50	unlimited	£0.00	9-9 M-Su	56(Flex/X2)	<10	2Mbps	5	5	Yes	No	Yes	No
£170.40	unlimited	£0.00	9-6 M-F	33.6	n/a	n/a	1	0	No	No	Yes	No
£141.00	unlimited	£0.00	8-8 M-F	56(Flex)	10	2Mbps	1	5	Yes	No	Yes	No
£180.00	unlimited	£0.00	8.30-5.30 M-F	33.6	n/a	128Kbps	call	call	Yes	Yes	Yes	No
£112.80	unlimited	£0.00	8.30-6 M-F	56(Flex)	<10	Megastream	1	0	Yes	No	Yes	No
£138.00	unlimited	£0.00	8-8 M-F 10-4 Sa	33.6	n/a	n/a	unlimited	1	Yes	No	No	No
£99.90	unlimited	£0.00	9.30-5.30 M-F 10-4 Sa	56(Flex)	15	1Mbps	1	2	Yes	No	Yes	No
n/a	unlimited	£0.00	9-6 M-F	56(Flex)	n/a	34Mbps	1	5	Yes	Yes	Yes	No
£117.50	unlimited	£0.00	8.30-6.30 M-F	33.6	18	256Kbps	3	10	Yes	Yes	Yes	No
£179.40	unlimited	£0.00	9-9 M-F 10-6 Sa-Su	33.6	n/a	90Mbps	1	1	Yes	No	No	Yes
£188.00	unlimited	£0.00	9-5 M-F	28.8	<10	n/a	1	0	Yes	Yes	No	No
£119.88	unlimited	£0.00	10-6 M-F	28.8	n/a	2Mbps	1	0	Yes	Yes	Yes	No
£179.40	unlimited	£0.00	24hrs 7days	33.6	10	n/a	5	0	Yes	Yes	No	No
£176.19	unlimited	£0.00	24hrs 7days	56(X2)	17	n/a	4	6	Yes	No	Yes	No
£126.76	unlimited	£0.00	9-9 M-F 9-5 Sa-Su	56(Flex/X2)	12	14Mbps	unlimited	25	Yes	No	Yes	No
£117.50	unlimited	£0.00	9-6 M-F 9-1 Sa	33.6	15	n/a	1	1	Yes	No	Yes	No
£42.30	unlimited	£0.00	11-11 M-F	56	n/a	n/a	1	0	Yes	No	Yes	No
£117.50	unlimited	£0.00	8-8 7days	56(Flex)	15	1Mbps +256Kbps	1	5	Yes	No	Yes	No
£116.90	unlimited	£0.00	9-10 7days	56(Flex)	<10	10Mbps	1	10	Yes	No	Yes	No
£117.50	unlimited	£0.00	9-11 7days	56(Flex)	n/a	n/a	1	5	Yes	No	Yes	No
£120.00	unlimited	£0.00	9-9 M-F 10-1 Sa	33.6	12	1Mbps	11	5	Yes	No	Yes	No
£105.75	unlimited	£0.00	9-5 M-Sa	33.6	<10	64Kbps	1	1	Yes	No	Yes	No
£70.50	5	£2.06	8.30-6 M-F	14.4	n/a	n/a	1	0	No	No	No	No
£116.33	unlimited	£0.00	8.30-6 M-F	33.6	15	256Kbps	1	0	Yes	No	Yes	Yes
£99.29	unlimited	£0.00	8-8 M-F	33.6	n/a	n/a	5	5	Yes	Yes	Yes	No
£141.00	unlimited	£0.00	9-6 M-F	56(X2/v.90)	12	4Mbps	1	0.5	Yes	No	Yes	No
£107.16	unlimited	£0.00	11-7 M-F	56(X2)	<10	2Mbps	1	2	Yes	No	Yes	No
£126.90	unlimited	£0.00	9-5 M-F	33.6	n/a	n/a	1	5	Yes	No	Yes	No
£100.00	unlimited	£0.00	7-7 M-F 10-3.30 Sa-Su	56(Flex)	n/a	2Mbps	1	5	Yes	No	Yes	Yes
n/a	unlimited	£0.00	9-7 M-F	33.6	15	128Kbps	2	1	Yes	No	Yes	No
£117.50	unlimited	£0.00	24hrs 7days	56(Flex/X2)	<10	2Mbps	10	5	Yes	Yes	Yes	No
£170.38	unlimited	£0.00	9.30-6 M-F	33.6	n/a	n/a	1	3	Yes	Yes	Yes	No
£47.88	unlimited	£0.00	24hrs 7days	56(Flex/X2)	1	n/a	5	5	Yes	Yes	Yes	No
£116.33	unlimited	£0.00	24hrs 7days	56(Flex)	12	n/a	1	5	Yes	No	Yes	Yes
n/a	unlimited	£0.00	24hrs 7days	33.6	<10	100Mbps	unlimited	0	Yes	Yes	Yes	No
n/a	unlimited	£0.00	8-9 7days	33.6	<10	20Mbps	1	5	Yes	Yes	Yes	No
£117.48	unlimited	£0.00	24hrs 7days	56(X2)	<10	n/a	unlimited	unlimited	Yes	Yes	Yes	No
n/a	unlimited	£0.00	8-9 7days	33.6	<10	20Mbps	1	5	Yes	Yes	Yes	No
£116.33	unlimited	£0.00	9-6 M-F 9-4 Sa	28.8	10	n/a	1	2	No	No	Yes	No
£164.45	unlimited	£0.00	8.30-8.30 M-F 9-6 Sa	33.6	n/a	n/a	15	n/a	Yes	Yes	Yes	No
£187.50	unlimited	£0.00	9-5.30 M-F	56(Flex)	11	0.5Mbps	10	10	Yes	No	Yes	No
n/a	unlimited	£0.00	9-5 M-F	33.6	10	512Kbps	1	0	Yes	No	Yes	No
£176.25	unlimited	£0.00	9-5 M-F	56(Flex)	13	4Mbps	1	unlimited	Yes	Yes	Yes	Yes
£152.75	unlimited	£0.00	24hrs 7days	28.8	n/a	n/a	3	3	Yes	No	Yes	Yes
£135.00	unlimited	£0.00	24hrs 7days	56(Flex)	10	10Mbps	5	5	Yes	Yes	Yes	No
£100.00	unlimited	£0.00	9-9 M-F 9-6 Sa-Su	33.6	10	128Kbps	1	2	Yes	No	Yes	Yes
£141.00	unlimited	£0.00	24 Hrs 7days	56(X2)	n/a	10Mbps	1	10	Yes	No	Yes	No

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	Simnet	0800 0745547	www.simnet.co.uk	sales@simnet.co.uk	National	£0.00	n/a
	Skynet Internet Services	01604 452245	www.skynet.co.uk	sales@skynet.co.uk	National 0845	£0.00	£11.75
	SoftProg Net	0181 7880656	www.softprog.net	sales@softprog.net	National	£8.00	£11.75
●	Sonnet Internet Ltd	0171 8912000	www.sonnet.co.uk	enquire@sonnet.co.uk	National	£29.38	£14.69
	Stayfree Internet	0116 2910909	www.stayfree.co.uk	sales@stayfree.co.uk	Leicestershire 0116	£10.00	£9.99
	Supernet	01534 880044	www.itl.net	admin@itl.net	Channel Islands	£0.00	n/a
●	Surflink	0800 243777	www.surflink.co.uk	info@surflink.co.uk	National 0845	£0.00	£9.39
●	Swank & Swagger	01179 042288	www.swagger.co.uk	enquire@swagger.co.uk	01179 01225	£0.00	£11.75
	Talk-101	01925 245145	www.talk-101.com	sales@mail.talk-101.com	0161 0151 01925	£23.50	£11.75
	Taunton Cyber	01823 353771	www.taunton-cyber.co.uk	info@taunton-cyber.co.uk	National 0845	£10.00	£15.00
	Technocom plc	01753 714200	www.technocom.co.uk	sales@technocom.co.uk	National 0845	£10.00	£12.00
	Telinco	0800 5424343	www.telinco.net	sales@telinco.net	National 0845	£20.00	£10.00
	Thames Global Internet Services	01344 641627	www.tgis.co.uk	info@tgis.co.uk	National 0845	£0.00	£11.75
	The X-Stream Network	0870 730 6466	www.x-stream.com	info@x-stream.com	National 0845	FREE	FREE
	The Internet Business Ltd	01232 424190	www. tibus.net	info@tibus.net	National	£0.00	£8.81
	The Internet in Nottingham	0115 9562222	www.innotts.co.uk	info@innotts.co.uk	Nottingham 0115	£17.63	£14.69
	The Internet Shop	01355 276600	www.inter-s.co.uk	enquiries@inter-s.co.uk	01355	£23.50	£9.34
	The Legend Internet	01274 743500	www.legend.co.uk	sales@legend.co.uk	National	£0.00	£14.69
	The Web Factory (Thames Valley)	01344 867733	www.webfactory.co.uk	sales@webtv.co.uk	National	£15.00	£20.00
	The Web Factory Ltd	01782 858585	www.webfactory.co.uk	sales@webfactory.co.uk	call	£25.00	£12.50
●	Timewarp	0161 9508855	www.timewarp.co.uk	sales@timewarp.co.uk	National	£0.00	£11.75
	Total Connectivity Providers	01703 393392	www.tcp.co.uk	sales@tcp.co.uk	National	£8.23	n/a
	TRINET IMB LTD	01539 731000	www.trinetimb.com	info@trinetimb.com	National 0845	£23.50	£17.63
●	Tweednet	01573 229933	www.calligrafix.co.uk	mike@calligrafix.co.uk	01835 01573	£29.38	n/a
●	U-NET Limited	01925 484444	www.u-net.net	hi@u-net.com	National 0845	£14.10	£14.10
	UK2NET	0171 3940388	www.uk2net.com	sales@uk2net.com	Surrey London	£0.00	£9.90
●	UKIP	01772 908000	www.ukip.co.uk	internet@ukip.co.uk	National	£23.50	n/a
●	UK Online Ltd	01749 333333	www.ukonline.co.uk	sales@ukonline.co.uk	National 0845	£0.00	£11.99
	UNINET	0800 7837499	www.uninet.co.uk	sales@uninet.co.uk	National	£11.75	£15.26
	UNITE Solutions	01232 777338	www.unite.co.uk	solutions@unite.co.uk	Belfast	£17.63	£14.69
●	UUNET PIPEX Dial	0500 474739	www.uunet.pipex.com	sales@dial.pipex.com	National	£11.75	£14.98
	VAS-NET	01732 866529	www.vas-net.net	mail@vas-net.net	London and SE	£11.75	£6.76
	Virgin Net	0500 558800	www.virgin.net	advice@virgin.net	National	£0.00	£11.99
	Voss Net plc	01753 737800	www.vossnet.co.uk	info@vossnet.co.uk	London Reading	£0.00	£11.75
	WaveNet	01253 794386	www.wavenet.co.uk	sales@wavenet.co.uk	National	£0.00	n/a
	Wave Rider Internet	0121 6033888	www.waverider.co.uk	info@waverider.co.uk	National	£0.00	£11.74
●	WEBplus	0345 932758	www.webplus.co.uk	info@webplus.co.uk	National	£25.00	£14.10
●	Webscape	01963 370800	www.webscape.co.uk	webmaster@webscape.co.uk	National	£0.00	£11.75
	Webtronix	0115 9568823	www.webtronix.co.uk	sales@webtronix.co.uk	National	£15.00	£14.68
●	West Dorset Internet	01305 871543	www.wdi.co.uk	tim@wdi.co.uk	National	£0.00	£15.00
	Which? Online	0645 830240	www.which.net	ogunlarur@which.co.uk	National	£11.75	£14.75
●	WildNET Ltd	01604 365600	www.wildnet.co.uk	stuartj@wildnet.co.uk	National 0845	£14.98	£11.75
	WinNet	0181 9306688	www.win-uk.net	info@win-uk.net	National 0645	£0.00	£17.63
	Wirenet Amiga	01925 496482	www.wirenet.co.uk	sales@wirenet.co.uk	National	£14.00	£14.25
●	Wisper Bandwidth Plc	01788 569777	www.wisper.net	sales@wisper.net	Leased Lines From 64K	"£1,500.00"	£350.00
●	WiSS	01248 602405	www.wiss.co.uk	sales@wiss.co.uk	National	£0.00	£11.75
	Wyenet Internet Services	01989 762476	www.wyenet.co.uk	sales@wyenet.co.uk	National	£14.10	£14.10
	Zen Internet Ltd	01706 713714	www.zen.co.uk	sales@zen.co.uk	Manchester Lancs	£0.00	n/a
	ZetNet Services Ltd	01595 696667	www.zetnet.co.uk	info@zetnet.co.uk	National	£0.00	£10.00
	Zoo Internet	0181 9617000	www.zoo.co.uk	support@zoo.co.uk	National	£0.00	£12.50
●	Zulu Internet	01494 758895	www.zulu.co.uk	simon@zulu.co.uk	National	£0.00	£11.75
	Zynet Ltd	01392 209500	www.zynet.co.uk	sales@zynet.net	National 0845	£23.50	n/a

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£ PER YEAR	HRS PER MONTH INC	COST PER HOUR EXTRA	TELEPHONE SUPPORT	MAX MODEM SPEED	USERS PER MODEM	BANDWIDTH	EMAIL ADDRESSES INC	WEB SPACE INC (Mb)	ISDN AVAILABILITY	NEWSGROUP CENSORING	MACINTOSH SUPPORT	STUDENT DISCOUNT
n/a	unlimited	£0.00	10-6 M-F	33.6	10	128Kbps	1	1	Yes	No	No	No
n/a	0870 Prefix	£2.40	10-6 M-F 10-3 Sa	56(Flex/X2)	<10	4Mbps	1	5	Yes	No	Yes	No
£129.25	unlimited	£0.00	9.30-9 M-F 10-4 Sa-Su	33.6	16	n/a	unlimited	10	Yes	No	No	No
£141.00	unlimited	£0.00	9-7 M-Sa	33.6	10	256Kbps	3	5	Yes	Yes	Yes	No
£176.25	unlimited	£0.00	9-9 M-F 9-6 Sa	56(Flex)	20	2Mbps	unlimited	5	Yes	No	Yes	No
£109.99	unlimited	£0.00	10-7 7days	33.6	10	256Kbps	1	2	Yes	Yes	Yes	No
£175.00	unlimited	£0.00	24hrs 7days	33.6	n/a	4Mbps	1	2	No	No	Yes	No
£85.00	unlimited	£0.00	9-6 M-F	28.8	<10	128Kbps	5	2	Yes	No	Yes	No
n/a	unlimited	£0.00	10-6 7days	33.6	25	192Kbps	1	0.5	No	No	No	No
£117.50	unlimited	£0.00	10-5.30 M-Sa	28.8	20	n/a	1	2	Yes	Yes	Yes	No
£150.00	unlimited	£0.00	9-6 M-F	56	10	2Mbps	1	5	Yes	No	Yes	Yes
£142.00	unlimited	£0.00	9-6.00 M-F	56(X2)	<10	4Mbps	3	3	Yes	No	Yes	No
£120.00	unlimited	£0.00	10-6 M-F 10-3 Sa	56(Flex/X2)	10	4Mbps	5	5	Yes	Yes	Yes	Yes
£141.00	unlimited	£0.00	9-9 7days	56(X2)	15	128Kbps	3	1	Yes	No	Yes	No
FREE	unlimited	£0.00	24hrs 7days	56(Flex)	n/a	4Mbps	unlimited (web based)	0	No	n/a	No	No
£105.00	unlimited	£0.00	9-5.30 M-F	33.6	15	192Kbps	5	10	Yes	Yes	Yes	Yes
£141.00	unlimited	£0.00	10-7 M-F 10-4 Sa	56(Flex)	<15	768Kbps	4	2.5	Yes	No	Yes	No
n/a	unlimited	£0.00	8-5.30 7days	33.6	20	128Kbps	1	0	Yes	No	Yes	No
£158.63	unlimited	£0.00	9-6 M-Sa	56(Flex)	<10	2Mbps	1	10	No	No	Yes	No
n/a	unlimited	£0.00	8-7 M-F	33.6	10	1Mbps	5	5	Yes	Yes	Yes	No
£137.50	40	£0.50	9-6 M-F	33.6	10	n/a	1	0	Yes	No	Yes	No
£117.50	unlimited	£0.00	9-8 M-F	33.6	10	128Kbps	5	5	Yes	No	Yes	No
£193.88	unlimited	£0.00	9-6 M-F	33.6	<10	n/a	1	5	Yes	No	Yes	No
£183.30	unlimited	£0.00	9-5.30 M-F	33.6	25	n/a	unlimited	0	Yes	Yes	Tes	No
£211.50	unlimited	£0.00	9-5 M-F	33.6	<10	256Kbps	1	0	Yes	Yes	Yes	Yes
£117.50	unlimited	£0.00	8-10 M-F 10-4 Sa-Su	56(Flex/X2)	19	17.5Mbps	unlimited	5	Yes	No	Yes	Yes
£99.00	unlimited	£0.00	9-6 7days	56(Flex)	10	n/a	5	6	Yes	Yes	Yes	No
£125.00	unlimited	£0.00	9-7 M-F 10-5 Sa-Su	56(X2)	10	2Mbps	1	5	Yes	No	Yes	No
n/a	unlimited	£0.00	24hrs 7days	56(Flex)	n/a	n/a	1	unlimited	Yes	Yes	Yes	No
£140.86	unlimited	£0.00	24hrs 7days	56(Flex)	15	155Mbps	unlimited	5	Yes	Yes	Yes	No
£152.75	unlimited	£0.00	9-5 M-F	33.6	12	256Kbps	1	0.1	Yes	Yes	Yes	No
£167.79	unlimited	£0.00	9-8 M-F 10-6 Sa	56(Flex/X2)	n/a	155Mbps	5	2	Yes	No	Yes	No
£81.08	unlimited	£0.00	9-8 M-F	56(Flex/X2)	10	n/a	5	5	Yes	Yes	Yes	No
£143.88	unlimited	£0.00	24hrs 7days	56(X2)	10	155Mbps	1	10	Yes	Yes	Yes	No
£116.33	unlimited	£0.00	9-6 M-F	33.6	13	2Mbps	1	2	No	No	Yes	No
£116.33	unlimited	£0.00	9-6 M-F	56(Flex)	n/a	n/a	5	10	Yes	Yes	Yes	No
£117.49	unlimited	£0.00	24hrs 7days	56	10	n/a	5	5	Yes	Yes	Yes	No
£135.36	unlimited	£0.00	9-8 7days	56(Flex/X2)	<10	20Mbps	1	10	Yes	Yes	Yes	No
£141.00	unlimited	£0.00	7-7 M-F 7-1 Sa 7-12 Su	33.6	15	2Mbps	1	2	Yes	Yes	Yes	No
£176.00	unlimited	£0.00	10-6 M-F 10-4 Sa	28.8	10	256Kbps	2	2	Yes	Yes	No	Yes
£176.25	unlimited	£0.00	9-5 M-F	56(Flex)	<10	n/a	1	1	Yes	No	Yes	No
£177.00	unlimited	£0.00	24hrs 7days	56	10	2Mbps	1	2	No	Yes	Yes	No
£129.25	unlimited	£0.00	9-9 7days	28.8	16	2Mbps	1	1	Yes	No	Yes	No
n/a	unlimited	£0.00	9-6 M-F	56(Flex/X2)	<10	n/a	unlimited	1.5	Yes	No	Yes	No
£115.00	unlimited	£0.00	9-7 7days	56(Flex/X2)	17	n/a	unlimited	5	Yes	No	No	No
"£3,500.00"	unlimited	£0.00	24 Hrs 7 days	Leased Lines Only	n/a	25Mbps	n/a	n/a	No	No	Yes	No
n/a	unlimited	£0.00	9-5 7days	33.6	<10	2Mbps	1	2	Yes	No	Yes	No
£141.00	unlimited	£0.00	8-8 7days	56(X2)	12	2Mbps	4	5	Yes	Yes	Yes	No
£129.25	unlimited	£0.00	9-8 M-F 10-5 Sa-Su	56(X2)	12	n/a	1	5	Yes	No	Yes	No
£100.00	unlimited	£0.00	9-8 M-Sa	56(X2)	12	2.5Mbps	unlimited	10	Yes	Yes	Yes	No
£99.00	unlimited	£0.00	9-9 7days	33.6	20	2Mbps	2	5	Yes	Yes	Yes	No
£129.25	unlimited	£0.00	8-11 7days	56(Flex)	<10	11Mbps	1	5	Yes	Yes	Yes	No
£141.00	unlimited	£0.00	9-6 M-Sa	28.8	15	256Kbps	1	3	Yes	Yes	Yes	No

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Huh?!

Those Internet terms explained

COMPLETE & EXPLAINED

Practical Internet takes the techno-babble and turns it into plain English

ACTIVEX
Microsoft's programming language that downloads and runs programs on your computer's own hard drive. ActiveX technology is used with Microsoft Internet Explorer to make interactive Web pages that look and behave like computer programs, rather than static pages. With ActiveX, users can ask or answer questions, use push buttons, and interact in other ways with the Web page.

ATTACHMENT
A file which is included along with an email message.

BANDWIDTH
This refers to the amount of data that can be sent through a given communications circuit in a given amount of time. In general, greater bandwidth means faster transfer of data from one point to another on the Internet.

BOOKMARKS
The name given to Web sites which are 'marked' for future reference in Netscape Navigator. Also known as 'Favorites' in Internet Explorer.

COOKIE
Data that a Web server gives to a browser the first time the user visits the site. This is then updated with each return visit. The server saves the information the cookie contains about the user. The user's browser does the same – as a text file stored in the Netscape or Explorer system folder. Cookies store information such as username and password and what parts of the site were visited. This information can be updated with each visit.

DNS
Domain Name Server/Domain Name System. This converts an address such as http://www.paragon.co.uk into an IP (Internet Protocol) number, such as 194.72.242.3.

FLAME
Abusive messages which are sent by email or posted to a newsgroup in response to daft comments or elementary questions.

FTP
File Transfer Protocol. The method which is usually used for transferring files across the Internet. There are separate FTP programs available, although much of it is now done over the Web.

GIF
Graphics Interchange Format. A format for saving images so they can be 'seen' by a Web browser. GIF was developed in 1987 by giant US service provider CompuServe.

HTML
HyperText Markup Language. The universal language of the Web in which all pages are written. Official versions of HTML are defined by the W3 Consortium, which is at http://www.w3.org.

HTTP
HyperText Transfer Protocol. This is the protocol that is used to carry traffic between a Web browser's computer and the Web site.

INTELLIGENT AGENT
A software routine that uses 'intelligence' to do an assigned task. For example, searching through the Web for pages that match your personal tastes.

INTRANET
A (usually) private network which is only accessible by authorised users. For example, a company could connect its Bristol, London and Birmingham offices with its own private intranet.

IRC
Internet Relay Chat. A multi-user chat system. This is a feature of the Net which allows you to hold 'live' text conversations with other people on the same 'channel.'

ISDN
Integrated Services Digital Network. This is a digital alternative to current analogue phone lines. ISDN modems are already available, enabling its users to achieve much faster connection speeds.

ISP
Internet service provider. A company which sells connections to the Net. Compare with online service providers (OSPs) which provide an Internet connection in addition to their own exclusive members-only services such as chat forums, news services, and other information.

JAVA
A programming language developed by Sun Microsystems that enables a programmer to include multimedia effects and increased interactivity within Web pages.

JPEG
Joint Photographic Experts Group. JPEG is another file format that can be viewed on the Web. The image is compressed, thus reducing the file size, for faster loading.

KBPS
Kilobits per second. This represents your modem speed – high is better.

LEASED LINE
A permanent phone line between two points on the Internet.

LINKS
A link, or hyperlink, acts as a bridge between separate Web pages. By clicking on a link you are taken to another Web page.

MMX
Multimedia extensions. An improvement to Intel's Pentium processor which processes graphics, sound and other data at high speeds.

MODEM
Modulator/demodulator. A piece of equipment that connects computers to each other for sending communications via telephone lines. The modem converts the digital data of computers into analogue signals to send over the telephone lines, then changes it back into digital signals to be read by the computer on the other end. Modems are used for sending and receiving electronic mail, and also for surfing the Net.

MUD
Multi-User Dimension. An adventure game where many people around the world can play simultaneously and communicate within the confines of the game.

NEWSGROUPS
Discussion groups which are held over the Net. Also known as Usenet.

NEWSREADER
The software that enables you to read messages (or 'postings') that people have sent to newsgroups. Built into the popular Web browsers.

NEWS (NNTP) SERVER
The hardware that holds all the newsgroups you can access, usually based at your Internet service provider. If you've used DejaNews or HotBot to find the name of a newsgroup but can't find it when you look through your news server's list of available groups, you may be able to find it on a 'public access' server.

OFFLINE
When your computer is not connected to the Internet.

OFFLINE BROWSER
Software which downloads the content of Web pages onto your hard drive, so whole sites can then be viewed 'offline' at your convenience.

ONLINE SERVICE PROVIDER
A company which offers Internet access combined with its own interface and 'members-only' services, such as live chat rooms, message boards, online shopping malls and news feeds.

PLUG-INS
In the context of the Web, these are 'extensions' to your browser which enhance its functionality. Plug-ins enable you to play sound files or animations, for example.

POPS
Points of Presence. The modems which you dial into to connect to the Internet.

POP3
Post Office Protocol 3. The most recent version of a standard protocol for receiving email. POP3 is a client-server protocol in which email is received and held for you by your Internet server. Periodically, you check your mailbox on the server and download any new mail.

PPP
Point to Point Protocol. The protocol that lets your computer connect to the Internet via a modem.

SEARCH ENGINE
Web sites which contain powerful search facilities which let users find other pages on a specific subject.

SMTP
Simple Mail Transfer Protocol. A common protocol for sending email across the Internet, gradually being replaced by POP3.

TCP/IP
Transmission Control Protocol/Internet Protocol. The common language that all computers connected to the Internet use in order to communicate with each other. No TCP/IP, no Internet!

TELNET
The Telnet protocol allows you to use the Internet to type to another user's computer much as if you were sitting in front of it. This is known as 'terminal emulation.' Examples of Telnet services include searchable databases, bulletin boards and real-time chatlines.

URL
Uniform Resource Locator. A sequence of characters that specify the address of a resource on the Web, e.g a Web page (in the form http://) or an FTP site (in the form ftp://).

VRML
Virtual Reality Modelling Language. A programming language which is used to create the illusion of 3D objects for on-screen virtual reality environments. The computer shows an apparently three-dimensional object from a certain position, and then creates the illusion of movement by gradually changing the viewpoint.

WEB BROWSER
A program installed in your computer's memory that reads, or 'browses' Web pages. A full Internet connection is needed for them to browse the Web. Internet Explorer and Netscape Navigator are the most popular Web browsers, now available in 'suites' along with many other essential Internet programs.

Essential URLs

Cut down on frustrating searches by adding these sites to your bookmarks

Search engines

ALTAVISTA
http://altavista.digital.com

DEJANEWS
http://www.dejanews.com

EXCITE
http://www.excite.com

HOTBOT
http://www.hotbot.com

INFOSEEK
http://www.infoseek.com/

LYCOS
http://www.lycos.com

MAGELLAN
http://www.mckinley.com

SENIORS SEARCH
http://www.seniorssearch.com/

WEBCRAWLER
http://webcrawler.com/

Search directories

THE ARGUS CLEARINGHOUSE
http://www.clearinghouse.net

DISINFORMATION
http://www.disinfo.com

EUROSEEK
http://www.euroseek.net

FOUR11
http://www.four11.com

INTERNET TOOLS
http://www.itools.com

MY TAXI
http://www.mytaxi.co.uk/

UKONLINE
http://www.ukonline.com

WHAT'S ONLINE
http://www.whatsonline.co.uk

WIRED SOURCE
http://www.wiredsource.com

WWWOMEN
http://www.women.com

YAHOO!
http://www.yahoo.com

YAHOO! UK & IRELAND
http://www.yahoo.co.uk

Metasearchers

ALL-IN-ONE
http://www.albany.net/allinone

ASK JEEVES
http://askjeeves.com

INFERENCE FIND
http://www.inference.com/infind

METACRAWLER
http://metacrawler.com

SAVVYSEARCH
http://guaraldi.cs.colostate.
edu:2000/

Email search

BIGFOOT
http://www.bigfoot.com

THE EMAIL ADDRESS BOOK
ttp://www.emailbook.com

MAIL FINDER
tp://www.emailfinder.com

LYCOS PEOPLE FINDER
http://www.lycos.com/pplfndr.html

WHOWHERE?
http://www.whowhere.com

WORLD EMAIL DIRECTORY
http://www.worldemail.com/
index.shtml

YAHOO PEOPLE SEARCH
http://yahoo.four11.com/cgi-bin/
Four11Main?yahooe&template=yahoo.t

Phone directories

ELECTRONIC YELLOW PAGES
http://www.eyp.co.uk

SCOOT FREEPAGES
http://www.freepages.co.uk

WORLD WIDE YELLOW PAGES
http://www.yellowpages.com

Web site catalogues

100 HOT WEB SITES
http://www.hot100.com

COOL SITE OF THE DAY
http://cool.infi.net

TOP 50 UK WEB SITES
http://www.top50.co.uk/list.htm

WEB100
http://www.web100.com

WORLD 1000
http://www.hitbox.com/wc/world.html

YELL
http://www.yell.co.uk/

Mailing lists

INREFERENCE
http://www.reference.com

LISZT
http://www.liszt.com

PUBLICLY ACCESSIBLE
MAILING LISTS
http://www.neosoft.com/internet/paml

Software downloads

COOL TOOL
http://www.cooltool.com

DAVE CENTRAL
http://www.davecentral.com

DOWNLOAD.COM
http://www.download.com

JUMBO SHAREWARE
http://www.jumbo.com

SHAREWARE.COM
http://www.shareware.com

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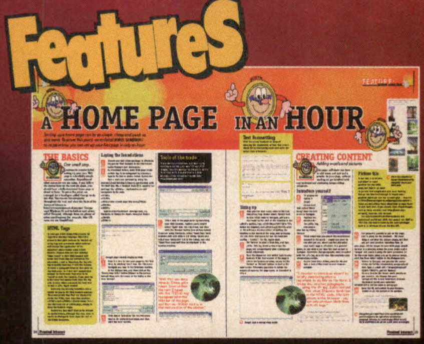

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Any new subscriber who pays for 12 months access in advance (£90 + VAT) gets a free 33.6kbps internal fax modem – subscribe to *Practical Internet*, though, and you'll get the modem bumped up to a 56kbps model for no additional cost.

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SPAMMEr in the works

Before you boot up your PC and send your modem signals into cyberspace, be prepared. You're in for a big disappointment, says **SPAMMER**

Disappointment is nothing new to Net users. Every time you boot up your machine and log on to the Net, you know that a feeling of being let down is never going to be far away. Sometimes a setback happens so quickly you've barely even had time to sit down and get started. I mean, how often have you logged on only to be immediately booted off again? Don't you just hate it when that happens? Especially when it occurs again and again and again… I mean, there are some days when you never even manage to get online. It can't be right.

And then there's email. Everyone bangs on about how good email is – how fast it is, how immediate – but they never seem to realise it takes someone at the other end to reply. Email isn't a solitary pursuit. Well, it shouldn't be. So what happens? You send off a load of emails – for argument's sake, let's say 20,000 unsolicited emails advertising a get-rich-quick scheme I'm involved in – and no one has the common courtesy to reply. How is it people can be so rude? Especially when they could earn themselves some really serious dosh. But anyway, enough of that scam, erm, I mean scheme.

Then there are other disappointments, like when you're trying to find something on the Web and you just can't. However hard you try, however skilled you are at manipulating search engines and however lateral your thinking, you just can't seem to find what you're looking for. Even the most experienced Netties face this problem once in a while. It's just one of the burdens we face as Net users. It means that we have to think in a completely different way, be creative in our word selection. It's all about the thrill of the chase, except that the opposite of finding something is getting nowhere, and with that comes disappointment.

Of course, there's also the disappointment of having your expectations aroused over something or other, only to be turned off just as you're about to go into overdrive. In particular, I am referring to the over-hyped, over-inflated event of the summer, when two teenagers were going to lose their virginity live on the Net. Now wouldn't that have been amusing? Don't get me wrong, I wasn't about to thrash around in my best ski mask watching this pair get it off. And yes, when I checked out the site (**http://www.ourfirsttime.com**) and saw the pictures of the two 'virgin teenagers' I also didn't believe they were either teenagers or virgins. It didn't take a genius to work out that this had hoax tattooed all over it. But then there are some people who are just so gullible that they wanted it to be true, wanted it to happen. So I suppose if some people thought it was genuine, it couldn't have been that bad.

For me, it wasn't a question of believing or not believing it was going to happen. I just wanted to be there. Like for the live birth on the Net of baby Sean Oliver earlier this year, it would have been enough to have said, "I was there, I saw them get their rocks off." And like any groundbreaking event, these gems stand out like glittering milestones in the life of the Net.

Someone is going under the knife to change their gender. A company in Florida wants to broadcast this operation live on Web

That's why I wanted to watch this live screening of the teenage virgins. And that's why I watched the kid slipping into this world, although I had to hide behind my Balaclava every time it looked as if things were going to get gory.

And now there's another event to look forward to in November – something else, I hasten to add, that I'll have to witness but be unable to watch. Someone is going under the knife to change their gender.

A company in Florida wants to broadcast the operation live on the Web so we can all watch Robert turn into Tina. Or is that Jennifer into Terry? No matter, for whatever your view on this kind of thing it's another one of those events where you just have to say, "I was there." Snag is, I'm not convinced. I just don't think it'll happen. And that's going to be so disappointing.

What really annoys you about the Net? Email me at spammer@paragon.co.uk and let it all out...

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